RECRUITMENT SOURCES AND EMPLOYEE TURNOVER IN SECTORS OF THE CONSTRUCTION INDUSTRY

by

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CONTENTS

LIST OF TABLES

Chapter 2

Chapter 7

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No author is an island, each relies on a multitude of other individuals for support, succour, advice, guidance and unstinting faith.

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The organisations who facilitated the research are held to be shining examples of enlightened participants within the industry, and are thanked for their willingness and support.

Finally, thanks must go to the greatest support of all; my wife Lynda.

Abstract

The construction industry organisation must secure recruits who will not only serve to execute the immediate tasks, but also enable management of the organisation to adopt longer term strategic frameworks. In order for management to execute these longer term strategies the human resources employed must be perceived as being available as and when required, or else having stable tenure.

Recruitment practices within the industry have ignored an important factor when seeking to secure the potential recruit i.e. which source of recruitment is the more effective in terms of securing employees who remain within the organisation for an acceptable period of time. Personnel records of construction industry organisations were analysed and from this analysis sources identified which are predictive of lower turnover rates and also of stable or longer employee tenure. As a control, an organisation quite distinct from those related to construction was analysed as part of the study, to ensure that the findings were not spurious nor unique to this particular industry.

The procedure is applicable to all organisations within the construction industry as well as other industries. Being relatively straight-forward to setup and execute, the procedure involved affords the organisation the opportunity to focus on those sources of recruitment which are clearly shown to be the more effective thus releasing organisational resources e.g. finance, managerial expertise, for application in other areas.

The research clearly shows the link between Recruitment Source and Employee Turnover.

Chapter 1.0

INTRODUCTION

1.1 INTRODUCTION

The catalytic impetus for this research stems from the author's own participation within the construction industry. Several managerial posts with national and multinational organisations giving rise to the interest in the alternatives faced by those recruiting employees within the construction industry.

The construction industry as considered within this work may be taken in the broadest sense i.e. to include all those professions and activities which contribute towards the production of the built environment e.g. Architects, Surveyors, Contracting Organisations (both Public and Private Sector), Component Manufacturers, Materials Suppliers, etc. The bodies which make up the construction industry require employees to carry out numerous tasks and the sources used to secure these employees, and the resultant influence of each of the recruitment sources on employee turnover is the focus of this research.

The following text sets out the underlying hypotheses along with the objectives of the work, and also offers reasons as to why the work was executed. Suggestions as to how the work and its findings contribute to the wider pool of knowledge are explored, as are suitable research methodologies and the sample studied. Following on from this is a brief description of the contents of each chapter which should guide the reader into and through the thesis.

1.2 HYPOTHESES

In executing any research it is implicit within the work that the researcher holds certain hypotheses to be true. Within this research there are four hypotheses which will be considered and either supported as true, by the literature available and research findings, or rejected as mistaken. These hypotheses are as follows:

Hypothesis A

That the use of particular recruitment sources will result in an organisation recruiting employees who remain with the organisation for significantly longer periods of time.

Hypothesis B

That the use of certain recruitment sources will result in employee cohorts whose turnover rates are more manageable.

Hypothesis C

That the use of certain recruitment sources will improve the overall effectiveness of the recruitment practices and procedures carried out within the organiation.

Hypothesis D

That employees joining or leaving the organisation will have significant effects on other employees, and the organisation generally.

With a clear statement of the underlying hypotheses to be considered within the research, it allows the researcher to focus on applicational objectives.

1.3 OBJECTIVES

Gannon (1) indicated the importance and usefulness of analysing the various recruitment sources used to secure employees within one specific organisation in New York, which although suggesting predictive sources, subsequently received little further impetus or investigation.

Securing contracts (irrespective of their nature e.g. for design services, for production of components, delivery of materials, construction of the building), entails future

execution of obligations and as such management must be capable of resourcing each obligation, with human resources being perhaps the more difficult of all resources to plan for succinctly and accurately.

This research therefore investigates and reports on the recruitment sources used in various sectors of the construction industry, it relates the recruitment sources used to the organisation's employee turnover and assesses whether any of these recruitment sources may be useful in indicating stable employees and also be predictive of employee retention.

The primary applicational objectives of the research can be summated as follows:

To investigate recruitment sources used by construction organisations and to deduce if any of the recruitment sources used may act as an aid in improving the recruitment process as a function of the construction industry.

This objective is viewed from the point of view of Management: they are charged with securing and executing sufficient profitable work as will ensure full employment for all members of the organisation. The recruitment sources used may well be a major influence on the success or otherwise of the effort directed towards meeting the human resourcing need.

A secondary applicational objective of the research can be stated as follows:

To consider and summarise the effects of employee turnover upon the organisation, and the use of each recruitment source, especially those which may serve as indicators of long term employee tenure within the organisation.

This objective is viewed from a two pronged perspective, namely; those of management and of the potential employee. From management's point of view long

term tenure allows them to consider strategic options on a more substantial basis. Considered from the employee's point of view it may be that they derive substantial benefit from long term tenure, not only in remunerative terms but also in psychological currency. Additionally, this objective may be viewed from the individual organisations' standpoint and also from that of the industry as a whole i.e. image, culture, desirability, function, roles, environmental impact (on the wider business community, rather than nature).

A tertiary applicational objective of the research may be stated as follows:

To consider the hypotheses stated and provide substantive data and findings which may be replicated and/or expanded by others at a later date.

This objective being viewed as an integral part of a sound research undertaking which attempts to explain and/or expand the current knowledge within any field.

These objectives infer that there is some underlying reason which supports execution of the research.

1.4 REASONS FOR CARRYING OUT THE RESEARCH

The reasons for carrying out any piece of research may be considered under several broad headings(2,3):

a) Those which are personal; and,

b) To review current and existing knowledge seeking to grasp its wider meaning and impact; and,

c) To offer a construct which may be new or novel; and,

d) To explain some fact, previous finding or occurrence.

In this instance all four headings are applicable since:

i) the personal reward of enquiry, expertise development and comprehension can only be brought about by work of this nature; and,

ii) the consideration of current and existing knowledge allows the researcher to focus the available material and pass on resulting information to others; and,

iii) construction from, or explanation of facts, may prove of worth to others and so add to the greater pool of knowledge; and,

iv) the industry itself may be able to take the work, or elements from it, and make use of them; and,

v) the work and its findings may prompt others to consider areas in some detail; and,

vi) Several Professional and Industrial bodies, alongside individual researchers, have shown the need, and indeed the importance, of fully understanding the influences which act upon employees and the recruitment processes used within the construction industry.

This research represents an attempt to analyse a particular aspect of these processes using a readily replicable methodology.

1.5 METHODOLOGY AND SAMPLE

An implied objective of this research is that it should be non-specific, but rather generalisable and therefore applicable to organisations within the construction industry generally. Based on this premise it was decided that the research should encompass a suitably broad spectrum of organisations with regard to:

A. Recruitment Sources utilised.

B. Employee Turnover.

C. Employee Turnover related to Recruitment Source.

D. Operational areas.

E. Composition of workforce.

F. Diversity of duties undertaken by employees.

The methodology implemented is fully discussed later in the thesis, and is supported by the results obtained from the research which relate to a range of organisational types and sizes, viewed both longitudinally and transversely.

Cognisance is taken of the physical constraints placed upon the researcher whilst collecting, assimilating and processing data. The individual seeks to secure sufficient data as will make the research worthwhile, both on a personal level and on an industrial plane and supervision by Mentors proves invaluable when allocating time towards the necessary field work, processing data and presenting the information and the resultant findings for consumption.

1.5.1 Limitations on Sample

Whilst many organisations were approached to take part in the research, the resulting number who actually participated reflects an underlying resistance to research from the industry's constituent members. The organisations which participated within the research do however form a broad band from within the industry. They include: a Multi-disciplinary Surveying Practice, a component Manufacturer, a Contracting Organisations, a firm of Project Managers, and also an organisation which is on the edge of the construction industry.

1.5.2 Timescale

The construction industry by its very nature undergoes cyclical trends (4,5,6) which influence the level of recruitment at any point in time. In order to reduce the anomaly of these cyclical trends, a period of 5 years was selected as being the minimum framework which would be suitably dynamic and yet stable enough to iron out some of the cyclical influences and provide a framework from which to collect data.

Data permitting, then the fullest possible time period within the organisation is covered, in order to eliminate discrepancies and also to ensure a sufficiently broad

time frame. Coupled with the time period selected, and often a primary constraint, is the need to reduce the intrusion into personnel data to the very minimum possible and also to reduce the disruption caused to the operating unit under consideration, whilst bearing in mind current legislation e.g. The Data Protection Act. The researcher is there as an invited guest, and as such should not take unnecessary liberties nor impose too heavily on those engaged in their everyday course of duties or business activities.

1.6 CONTRIBUTION OF RESEARCH

This research examines the Recruitment Sources used in Sectors of the Construction Industry and the relationship between these sources and Employee Turnover. It further considers organisational implications of recruitment and generally, manpower resourcing. Demanding literature searches have shown that this approach is innovatory in the construction field, therefore the findings furnish a complementary qualitative and quantitative analysis of Recruitment Sources and Employee Turnover.

1.7 THESIS FORMAT

The thesis is presented in a structured format which offers the research in a logical and comprehensible fashion. The text is divided into a series of numbered chapters, each presenting component sections of the research. The chapters themselves are so structured that they support and interrelate with each other and pilot the reader towards subsequent sections.

Figures 1.1, 1.2 and 1.3, provide the reader with overviews of the processes involved in the construction and development of the thesis.

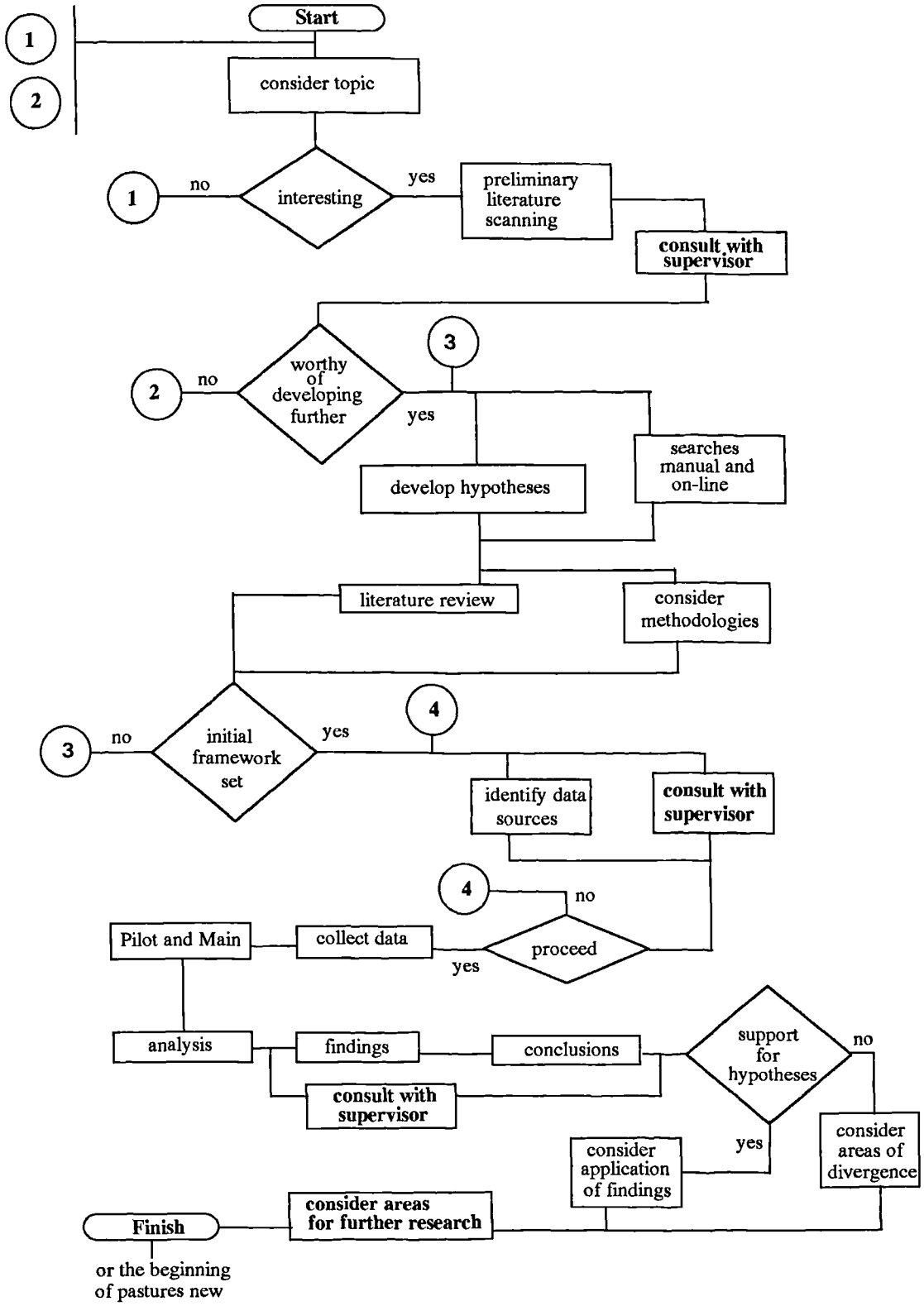

Figure 1.1 Flowchart of the Overall Process

Using the Flowchart from Figure 1.1 as the basis for proceeding forwards, it then allows the fuller development of the research and the thesis. The Thesis structure is shown in Figure 1.2.

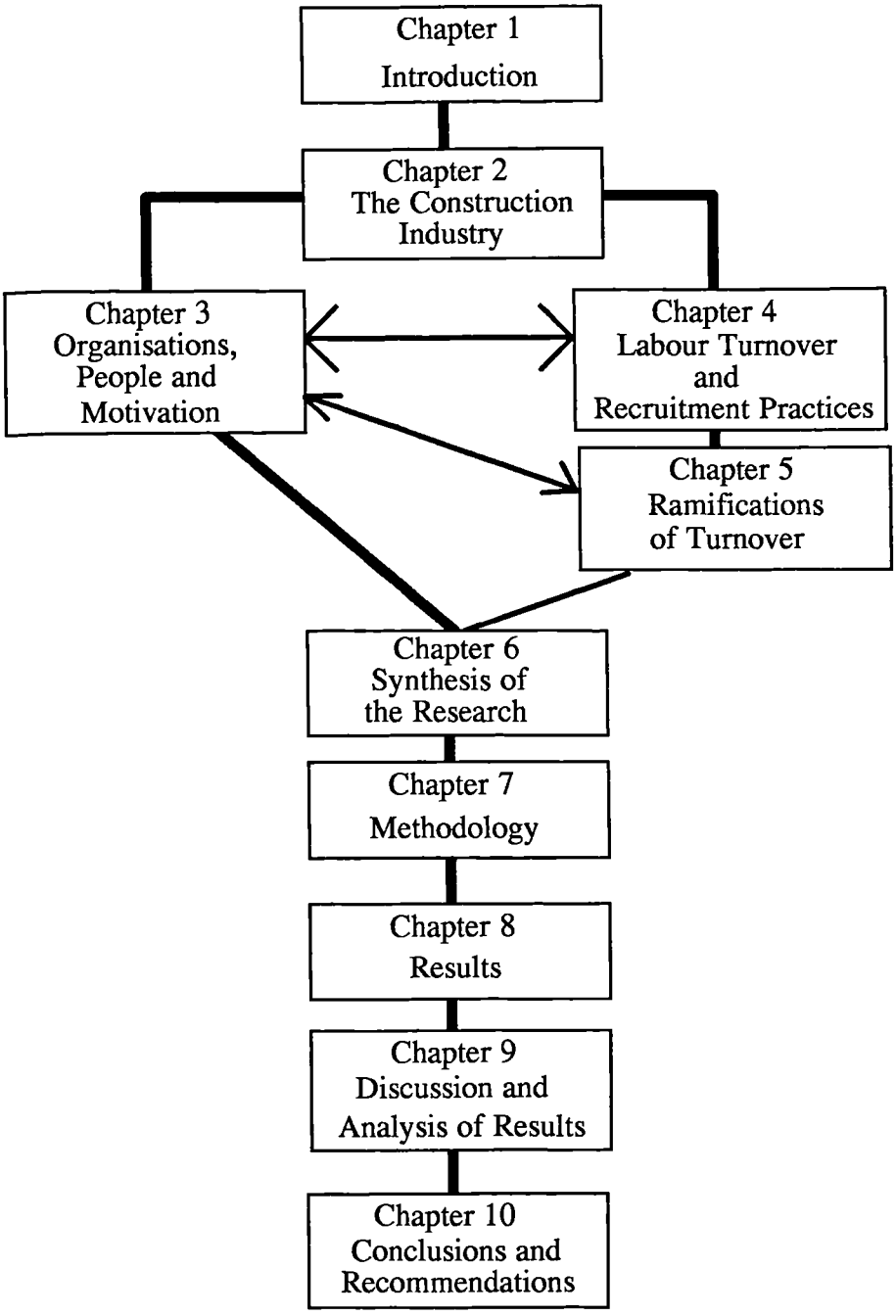

Figure 1.2 Thesis Structure

This structure may be expanded as shown in Figure 1.3, to provide the reader with a flavour of the elements within the work.

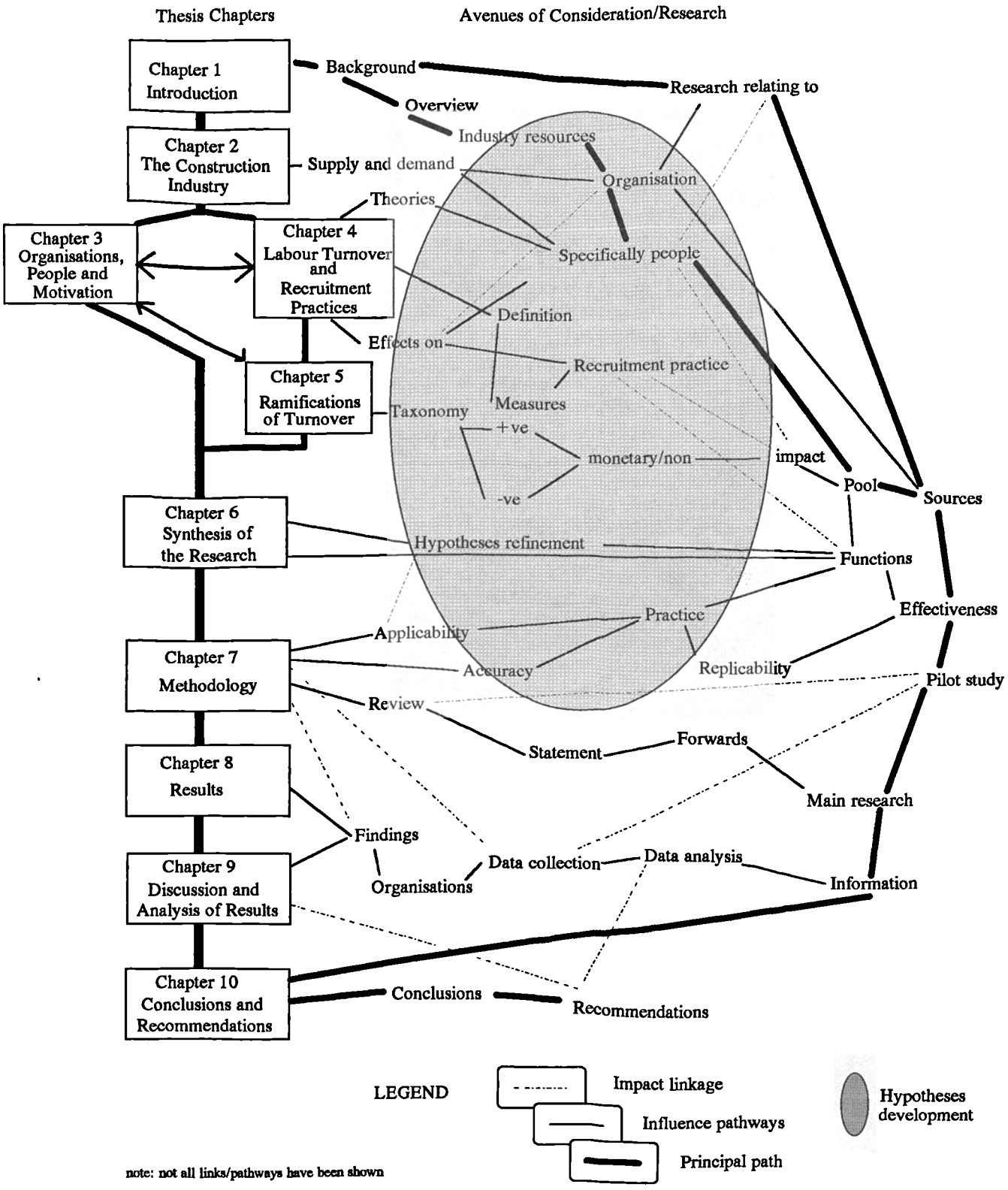

Figure 1.3 Development of the Thesis Structure

Figure 1.1 illustrates the wider, more general aspects of the thesis construction. Emphasis has been given to the major milestones within the work and the diagram is designed to indicate to the reader the underlying model upon which the whole work is founded. The emphasis on milestones of course does not exclude the many subsidiary issues which have also been considered and resolved.

Figure 1.2 outlines the general structure of the thesis and the various chapter titles, whilst Figure 1.3 focuses on many of the important topics areas which naturally arise when considering the recruitment sources used and their impact on the overall process of turnover. The diagram seeks to show the reader the detailed main path through the research, and also to illustrate how the subsidiary topics relate to the main path and serve to reinforce the areas shown as lying on the main path.

Both figures intend that the reader should develop an early awareness of the overall content of the work and also comprehend how each of the chapters relate to, and integrate with each other, and lead to the final chapter. The remaining chapters within the thesis are outlined below:

Chapter Two considers the construction industry and the various resources utilised within the industry along with the impact of substitution of these resources. Consideration of people as the most important resource leads into Chapter 3.

Chapter Three considers the organisational setting and the human within the organisation. It further discusses why the individual works, along with the underlying theories of Motivation and the attainment of Job Satisfaction. Understanding why the individual works and the influence of the workplace upon the individual may help in the grasping the reasons for particular recruitment sources being more effective than others. The recruitment sources are part of wider recruitment practices and these are discussed in Chapter 4.

Chapter Four gives some consideration to specific areas of the recruitment practices found within the industry and seeks to define turnover and its taxonomy, both from an organisational stand point and from the individual's viewpoint. The measurement of turnover is discussed and is considered in relation to the recruitment sources used and overall recruitment practices. Turnover has knock-on effects and these are considered in Chapter 5.

Chapter Five gives consideration to the ramifications of labour turnover, at the individual, organisational, and industry levels. These effects may affect the individual, the organisation and the industry, and reinforce or reduce the influence of a particular recruitment source.

Chapter Six synthesises the work and seeks to establish a model for Recruitment Sources which may be utilised by prospective employers and employees. The chapter also establishes a framework for the theoretical development of a general theory of Recruitment Sources used, in relation to source effectiveness.

Chapter Seven describes the methodology utilised in the pilot, and validation studies. The primary available methodologies are discussed and the resultant chosen methodology is detailed. Consideration is given to the field work executed in securing adequate data sources, and the resulting resolution of subsequent issues. This is then linked to the main experimental section by relating the chapters to the findings of the initial pilot research, which acts as the foundation of the methodology and aids in the formulation of the main research hypotheses. These hypotheses are stated in the light of an overall literature and pilot research, results synthesis.

Chapter Eight describes the results from the main field research in light of the organisations participating as data sources and the Pilot Research. The results are presented graphically with text descriptions, and suitable statistical analysis.

Chapter Nine discusses the results and seeks to reinforce the synthesis of the literature whilst maintaining close links with the previous chapters, in order to comprehend the work.

Chapter Ten offers conclusions of the research; a consideration on the attainment of the three objectives established and also outlines the implications and applications of the work. The chapter also suggests areas which have shown potential for further research.

Appendices follow which support the various points raised within the preceding chapters.

References are provided to enable location of the various supporting articles, publications and documents.

Chapter 2.0

THE CONSTRUCTION INDUSTRY

2.1 DEFINING 'THE CONSTRUCTION INDUSTRY'

The Central Statistical Office (1), and The Inland Revenue (2), each give a slightly varying description of the many occupations, professions and organisations which they consider key to the construction industry as a whole. Nonetheless, both these bodies are generally agreed that the industry is comprised of a multitude of occupations, professions and organisations. Langford and Male (3), sum up the definition problem when saying that the industry "is amorphous and diverse".

Each of the key elements within the industry interact to provide the image which the wider environment sees as the 'Construction Industry'. The complexity of this interaction is shown in Figure 2.1, which attempts to show the overlapping and intermingling of occupations, professions and organisations.

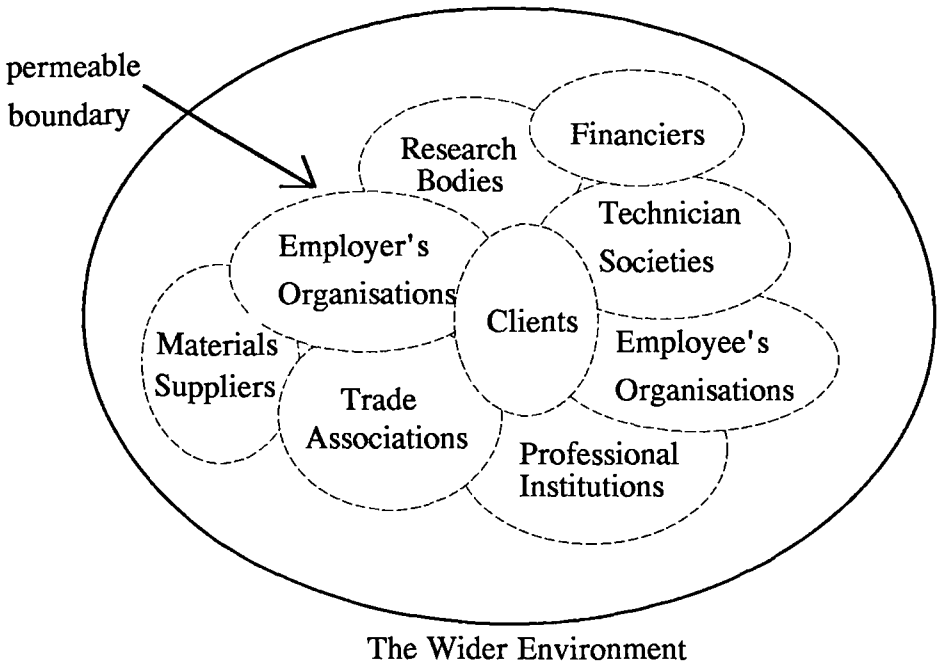

Figure 2.1 The Interaction within the Construction Industry

The organisations which make up the industry vary in: location, size, nature, objectives, structure, activities, and efficiency of resource usage, and collectively they provide a significant contribution towards total Gross Domestic Product.

Conditions for the construction industry as a whole, on the long run, appear to be immensely favourable (4,5,6,7). Throughout the history of the modern construction industry booms and recessions have come and gone. Parry Lewis (8) in his painstaking analysis of the industry from 1700 through to 1964 clearly demonstrated the existence of a cyclical nature to the industry.

The cyclical trends highlighted were found to be subject to influence from several factors; the more important being:

population fluctuations; and,
shocks, such as war; and,
credit.

It may be argued that the more applicable of these factors for the present, is of course CREDIT; its availability and associated interest payment rates having pronounced effects on all organisations.

Successive Governments of varying persuasions, have sought to control the nation's growing inflation rate through restraining the construction industry, more specifically the housing sector and its associated rise in capital values and hence, perceived disposable wealth. Recent recessionary trends within the industry are, when viewed in the wider historical context, slight deviations from a perceived cycle of growth.

Construction output (at constant 1985 prices, seasonally adjusted) for the U.K., is shown in Table 2.1, which clearly indicates in Figure 2.2 cyclical trends, and when correlated with year end mortgage interest rates, then the marked effect of interest rate of credit upon the industry is readily seen. In general, the values of output have been on the increase relative to 1985 and allowing for the recent high interest rates it can be argued from Figure 2.2 that the next major upswing in the UK is not far off (9). When it does arrive, the upsurge will unleash many of the problems witnessed in the mid 1980's.

Year	Output	Year	Output	Year	Output
69	31661	77	26713	85	27850
70	30986	78	28747	86	28757
71	31364	79	29178	87	31022
72	31957	80	27830	88	33269
73	32267	81	25141	89	34684
74	28965	82	25470	90	35037
75	27266	83	26647		
76	26842	84	27536		

Table 2.1 Construction Output

All output values are in £m. at constant 1985 prices, seasonally adjusted Source: Central Statistical Office.

In addition to its contribution to the Gross Domestic Product, Ward (10) notes that the industry's contribution may, to some degree, be measured by its provision of employment. Briscoe (11) reinforces this and adds strength by considering the industry's demand for inputs from other industrial sectors such as distribution, finance, and metal products.

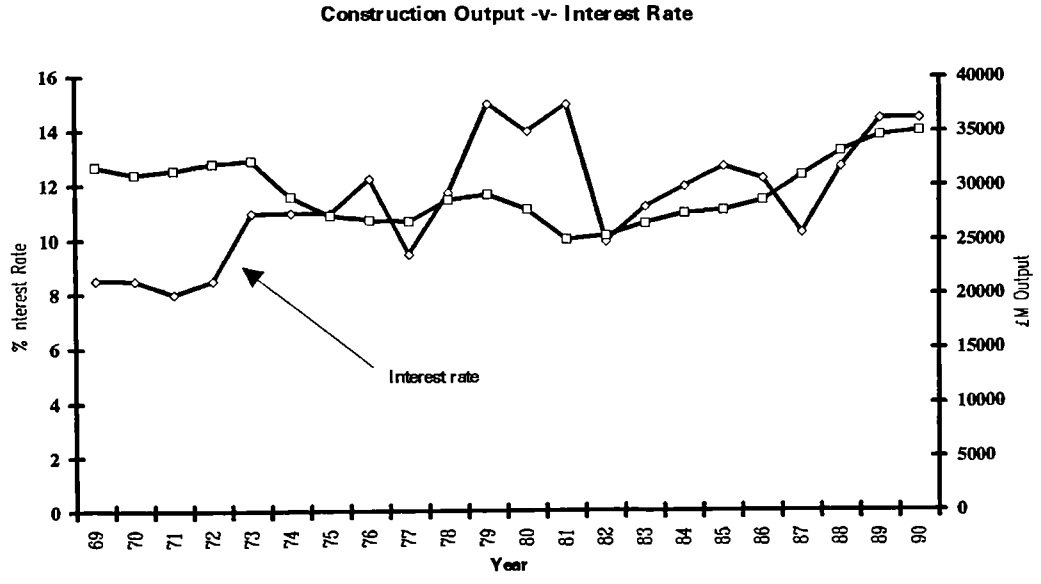

Figure 2.2 Output - v - Interest

This demand for inputs from the other sectors may well stimulate, or lead to, employment in each of the these sectors. The employment of people reduces the available labour in the market place and so may force the organisation to consider substituting other resources for the reduced labour pool.

2.2 RESOURCES: LABOUR AND ITS SUBSTITUTES

The construction industry takes as its basic inputs: capital, land, enterprise and perhaps most importantly, labour (12). These basic factors of production may be subject to substitution in varying degrees, but labour remains the more unpredictable (13). Drucker (14) perceived that management of an organisation worked with one specific resource: man.

Therefore due to the nature of labour supply the ramifications of shortfall or excess are considerable. Samuelson (15) when reviewing financial implications considers least-cost factor combinations for given outputs in order to arrive at the least-cost input combination. Consideration given to iso-product curves (16) generated for varying rates of marginal substitution suggest that there exists a technical limit to the extent to which it is possible to replace manpower by capital. McFillen and Maloney (17) rightly emphasise that whilst the assumption is made that units of labour are interchangeable, in reality the labour units may well have widely varying skills, attributes and abilities and so be non, or only partially interchangeable.

Table 2.2, and 2.3 along with Figures 2.3 and 2.4 indicate to some extent, the numbers of people and range of employment within the construction industry.

Standard Occupation Classification		Males 000's	Females 000's	All 000's
26	Architects, Town Planners and Surveyors	102	10	112
31	Draughtspersons, quantity and other surveyors	111	20	131
50	Skilled construction trades	632	11	643
101	Other occupations in construction	190	0	190

Table 2.2 Typical Range of Employment. Source: Employment Gazette, Sept 1992.
NB Management occupations and several others are considered within other all-embracing classifactions which obscure them from full view.

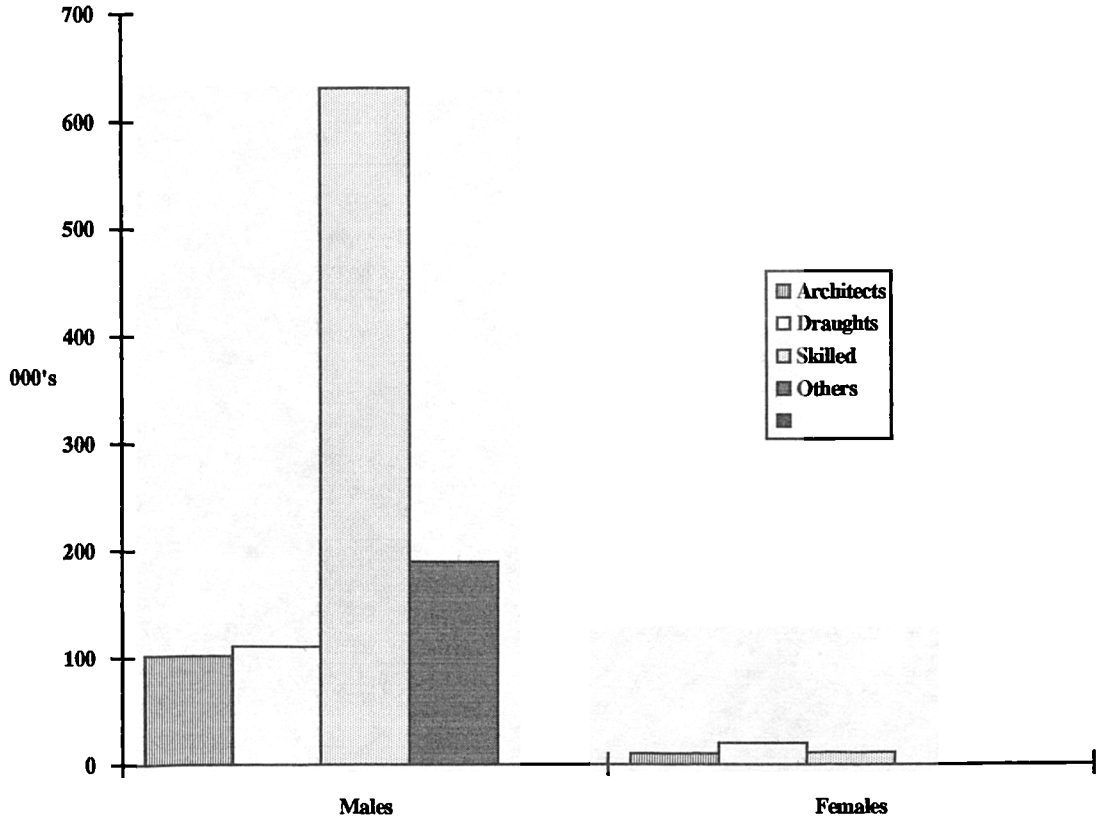

Figure 2.3 Males and Females in Certain Occupations

Standard Industrial Classification	Year	Employees in Employment Male 000's	Females 000's	All 000's
Division	1987	864	119	983
5	1988	894	127	1021
	1989	918	138	1056
	1990	904	140	1040
	1991	800	140	940
	1992*	673.4	139.5	812.9

Table 2.3 Contracting Organisations' Employees Source: Employment Department, SSD D2.
* estimate at Feb 1993.

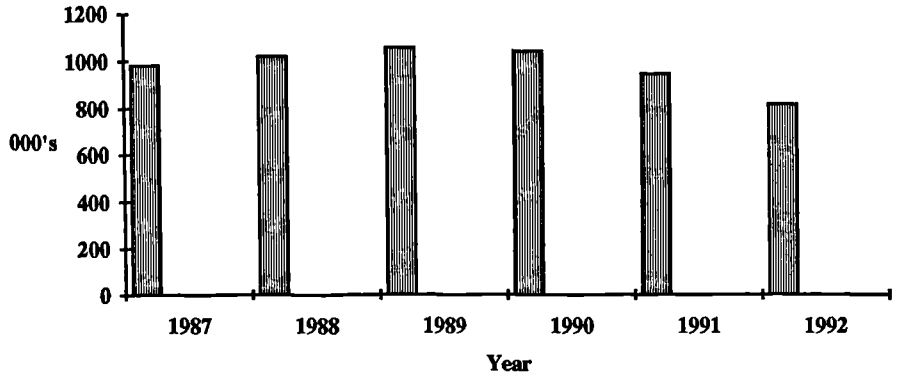

Figure 2.4 Employees in Employment in Contracting Organisations

Management must ensure that the organisation has sufficient resources in order to carry out a variety of tasks. The most important of all these resources are the humans within the organisation. McBeath (18) fully comprehended the need to analyse and plan the optimum means of obtaining the organisations' manpower requirements. As the available pool from which the manpower may be drawn diminishes (19,20,21,22,23,24), so the necessity to carefully plan and target the correct individual becomes paramount. Guest (25) forecasts that in 5 years time the industry may well be facing a shortfall of some 250,000 employees and is given support in this view by the Training Agency (26) and the Institute for Employment Research (27), who see the industry's population endeavouring to increase, substantially, over the remainder of this decade.

During the last boom period many of the industry's participants were only too well aware of the shortages of skilled human resources in particular geographic, as well as skill areas. Now that a perceived downturn is facing the industry, the "Demographic Time-bomb" seems to have dematerialised. The problem has not vanished, but simply been masked from full view.

Employers seeking to recruit in the next rising current will be faced with several difficulties:

i) Pressure on management to secure the skilled personnel; and,

ii) Induced stress on existing staff; and,

iii) Increased recruitment costs; and,

iv) Restrictions on business take-up from lack of human resources.

These problem areas will not be confined to the shores of the UK. The European Community has, since 1985, witnessed a constant upswing in the activity of many member nation's construction industry. Table 2.5 and Figures 2.5 and 2.6, illustrate the growth in construction activity in the UK and several of the European Community member states. So long as this buoyant mood continues then the greater will be the pressures on all EC industry participants who seek to recruit various forms of labour. The Directorate-General for Employment (28) have clearly considered this impending problem in some detail and seek to highlight alternatives which may be open to employers. Nonetheless to satisfy the demand for output, so then employers must secure and retain the manpower to carry out their contractual obligations.

Country	Year and Index value				
	1985	1986	1987	1988	1989
The Netherlands	100	95.2	84.7	89.6	92.4
Ireland	100	96	88	84	92
Italy	100	100.9	99.8	101	104.6
Germany	100	102.5	102.5	107.1	113.1
UK	100	103.1	111.2	119.1	123.8
Belgium	100	103.1	108.4	122.9	134.4
France	100	103.2	107.5	113.7	118.9
Spain	100	105.9	116.9	129	145.9
Denmark	100	115.3	116.1	112.9	108.6

Table 2.4 Construction Sector Turnover (1985= base year)

Source: Euroconstruct-BIPE (index values derived from turnover values at 1989, before taxes, in 1000M ECU's)

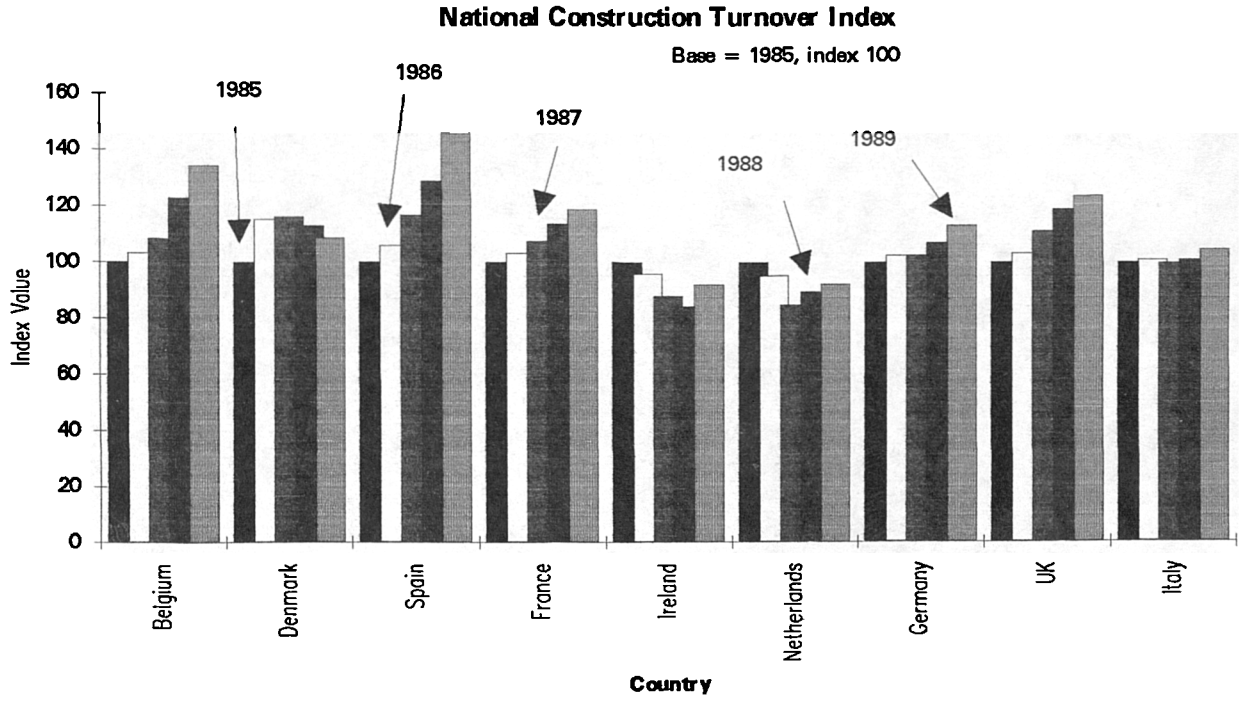

Figure 2.5 National Construction Turnover Index

horizontal axis shows YEAR, vertical axis shows % CHANGE

The industry on a European wide basis will seek to draw the necessary human resources from what may be considered as a finite pool. The Europeans in their own countries will seek to secure sufficient human resources as fulfil their contractual obligations for what ever type of work. Therefore whilst the European dimension may have little or no direct immediate impact on this work, the influence will come about in the long run.

2.3 INDUSTRY UNIQUENESS

It must be emphasised that the construction industry is unique, and this uniqueness spills over onto the organisations within the industry (29,30,31). The product is large, seldom able to be transported to new locations and therefore the actual site often becomes the centre of numerous productive processes. The environment in which the construction industry operates is subject to a wide range of influences and seldom, if ever, remains static. These influences emanate not only from *within* the industry itself, but also from external bodies such as Government, pressure groups, the public at large and other industries. The product is produced on a wide variety of locations; the product includes many component parts supplied by others who may be either factory based or mobile; no two projects are the same; the climatic conditions under which the operatives have to operate are constantly fluctuating; the organisations which make up the industry are predominantly small firms; the workforce is perceived as being the poor relation in terms of education, training and development, and also in terms of financial stability and security.

Detailed consideration of the construction industry shows that:

- The construction industry client is often heavily involved in the construction process, dealing directly with end-service providers. As such the client is in a strong position to influence the various processes which are underway. Contrast this with a purchaser of a motor vehicle, where the contact is only with the retail outlet.

- Construction invariably involves large-scale and highly complex assemblage of components which are awkward to handle and require fasten, especially on site. The

manufacturing industries may consider themselves blessed that their assembly takes place within an environment which allows wide use of mechanical aids and apparatus.

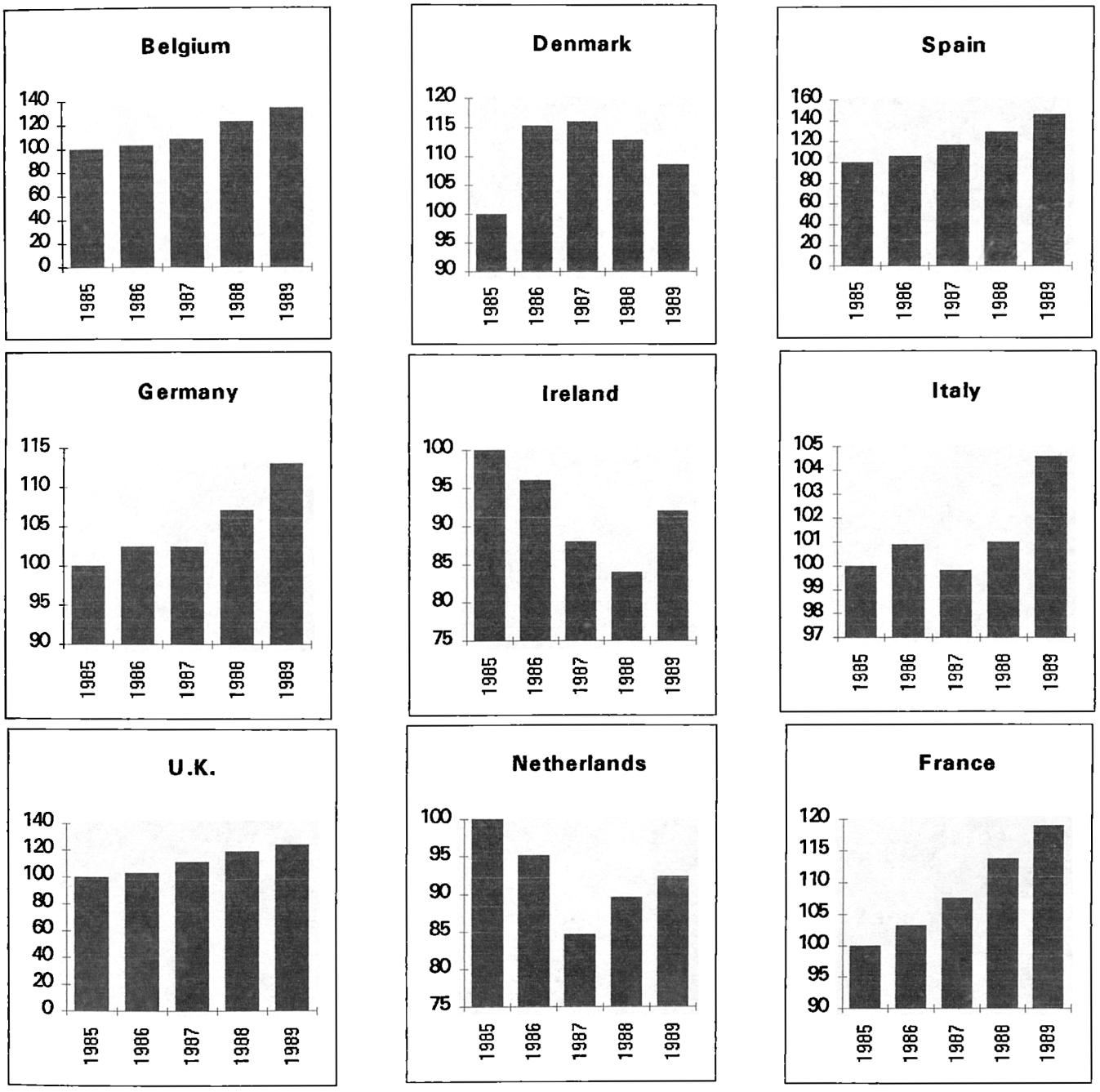

Figure 2.6 National Construction Turnover Indices

- Construction activities generally take place outdoors and as such suffer from all that the British climate can throw at them. Other industries mainly execute their activities within controlled, construction industry provided, environments.

- The sequencing of activities involved in the execution of any project demands that planning for the allocation of resources be seen as a critical factor in the completion of the project. Schedules must be met on time, with the risk of serious cost implications if they overrun. Manufacturing industries with 'conveyor belt type' facilities are able to more closely tune or re-tune the production processes so as to meet the schedules set.

- Construction operations are executed in an environment where safety measures are difficult to implement fully, and are set against a background of strong stereotyped image i.e. the macho male.

- The project under construction may be such that access to it, around it, and through it, may pose serious restrictions on the operations of the individual organisations.

- The working hours of the project may be limited in order to avoid nuisance to neighbours and emissions/waste from the operations under way may be heavily controlled.

- The project is usually unique in terms of design, therefore no significant jigs, moulds or templates may be transported from one project to another. The majority of manufacturing industries rely on the economies of scale likely to result from the re-use of such items e.g. repetition, standardisation..

- The majority of projects executed within the industry are of relatively short durations. The design activities may last for only a few months, the physical construction may take a few years; only the maintenance of the finished product continues for a prolonged period of time. Therefore the human resources required must gel together very quickly, be able to disperse with similar speed at the completion of the activities, be able to relocate, and be fairly flexible towards the activities embraced within their job title. The manufacturing industry is able to adopt longer, more strategic time-frames.

- The construction industry is transitory in that the project locations may be many miles from the resource base and so introduces substantial, short term, transportation requirements. Other industries tend to be located in one spot for a reasonable period of time.

- The construction industry tends to be more fragmented than other industries, with many transient organisations/individuals.

With these many distinguishing features it might be said that the argument for rejecting all management thoughts and theories derived from mainly manufacturing industries appears sound. However, whilst many of the writers discussed earlier have taken management thinking on organisations (which are primarily fixed in the one location, or a singular product, or a clearly defined, stable market, generally manufacturing) and applied these thoughts liberally across the widest possible organisational spectrum, no doubt exists as to the likelihood that many of the basic tenets underpinning general organisation theory will apply to the bulk of the construction industry participants, but so also will we see those organisations which do not fully fit within the stereotypes portrayed.

Much research is needed which focuses directly on the construction industry and its constituent member organisations. Because of these areas of uniqueness, careful consideration must be given to the organisations which operate within the industry, and also to the effects these organisations may have upon the people who make up the workforce.

The following chapter considers the nature of organisations and the impact they may have upon the individual and also the individual's contribution to the organisation.

Chapter 3.0

ORGANISATIONS, PEOPLE AND MOTIVATION

3.1 THE ORGANISATION

The construction industry is comprised of a wide variety of organisations. A range of tasks and processes are carried out within each of these organisations, and it is people who carry out these activities. Therefore in order to proceed further it is only logical to attempt to define what an organisation is, and why it is that people act the way they do when part of, or attempting to become members of, the organisation.

Definitions as to the meaning of the term "organisation" abound. Barnard (1) defined the organisation as being "a system of consciously co-ordinated activities of two or more persons." Anthony et al (2) considered that the organisation acquired resources which, hopefully, were utilised efficiently in producing outputs of goods and services. Kast and Rosenzweig (3) see the structuring and integrating of activities amongst people co-operating and working together in relationships which are interdependent, and that these activities are directed towards the attainment of defined objectives, as being fundamental elements within the organisation.

Leavitt (4) classified the organisation as being a collection of multivariate systems, within which a minimum of four interacting variables are predominant. These variables are illustrated in Figure 3.1, which illustrates and reinforces the earlier descriptions of an organisation.

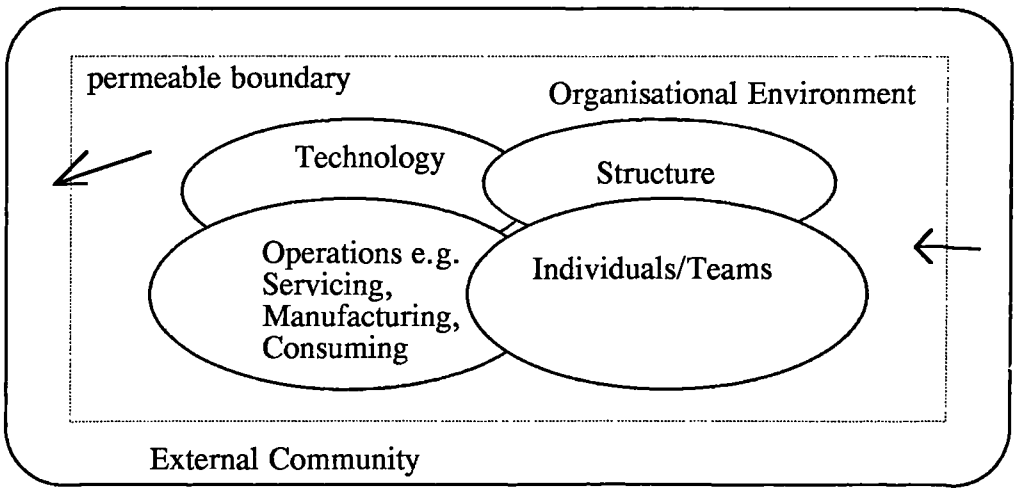

Figure 3.1 Four Organisational Variables developed from Leavitt, 1985, p363.

Each of these attempts to define the term adds to the overall comprehension of the term and generates further argument and/or analysis of the topic. The four (minimum) variables deemed necessary by Leavitt may be expanded further by suggesting that:

i) Task: underlies the reason for the very existence of the organisation i.e. servicing, producing, etc., and also including the multi-variate subtasks which reside within the organisation. The task may not be solely profit orientated and might well be highly complex; and,

ii) Actors: are deemed to include the individuals who comprise the organisation and all their resultant actions; and,

iii) Technology: is an all embracing title which includes not only hardware e.g. lathes, but also various processes or procedures which may solve problems, assist in their resolution or be utilised in controlling or directing machinery; and,

iv) Structure: encompasses, amongst other things, information systems, communicative processes, personal roles, work flow, establishment of authority, control mechanisms and reporting procedures.

Figure 3.1 clearly illustrates that each of these four variables is not an island in isolation, but rather an integral part of a greater whole and therefore a change or adjustment in one area will have a push or pull effect on the others.

Silverman (5) expresses three distinguishing features which characterise an organisation:

they may be perceived as consciously established artefacts which serve to attain certain purposes, within rule boundaries, which may be displaced over time.

relationship patterns are clearly discernible.

discussion and execution of planned changes in social relations are afforded considerable attention.

The latter two components are considered the more important due to their pervasive nature and their impact on the manpower within the organisation.

Torrington and Chapman (6) provide a general systems overview of the organisation; six subsystems comprised of variables which interact and are interdependent. These subsystems they classify as:

People,	Structure,	Technology,
Task,	Process,	Technique.

Thus they view the organisation as a "dynamic process involving component parts which are in interaction with each other and the environment of which it is a part". From this approach they are able to develop a conceptual model of the organisation (Figure 3.2), which (although much more detailed in content) complements Lupton's (7) model and Kast and Rosenzweig's 'Contingency View' which is shown in Figure 3.3.

The "Contingency View" as described by Kast and Rosenzweig (8) sees the organisation as a system, within which resides subsystems, which may be demarcated from the environmental suprasystem. It endeavours to comprehend the relationships emanating from, within and between the subsystems, the organisation and its environment. The complex intermingling of the organisational subsystems is clearly highlighted, and thus the effects of the actions of one sub-unit or group of sub-units may become greatly magnified before being perceived by the internal or external environments.

As the external environment becomes more complex, so adjustments will be made within the organisation's internal environment (including all appropriate sub-systems) to accommodate the new perceived 'status quo', these adjustments in themselves being witnessed by the external environment as the organisation's "behaviour".

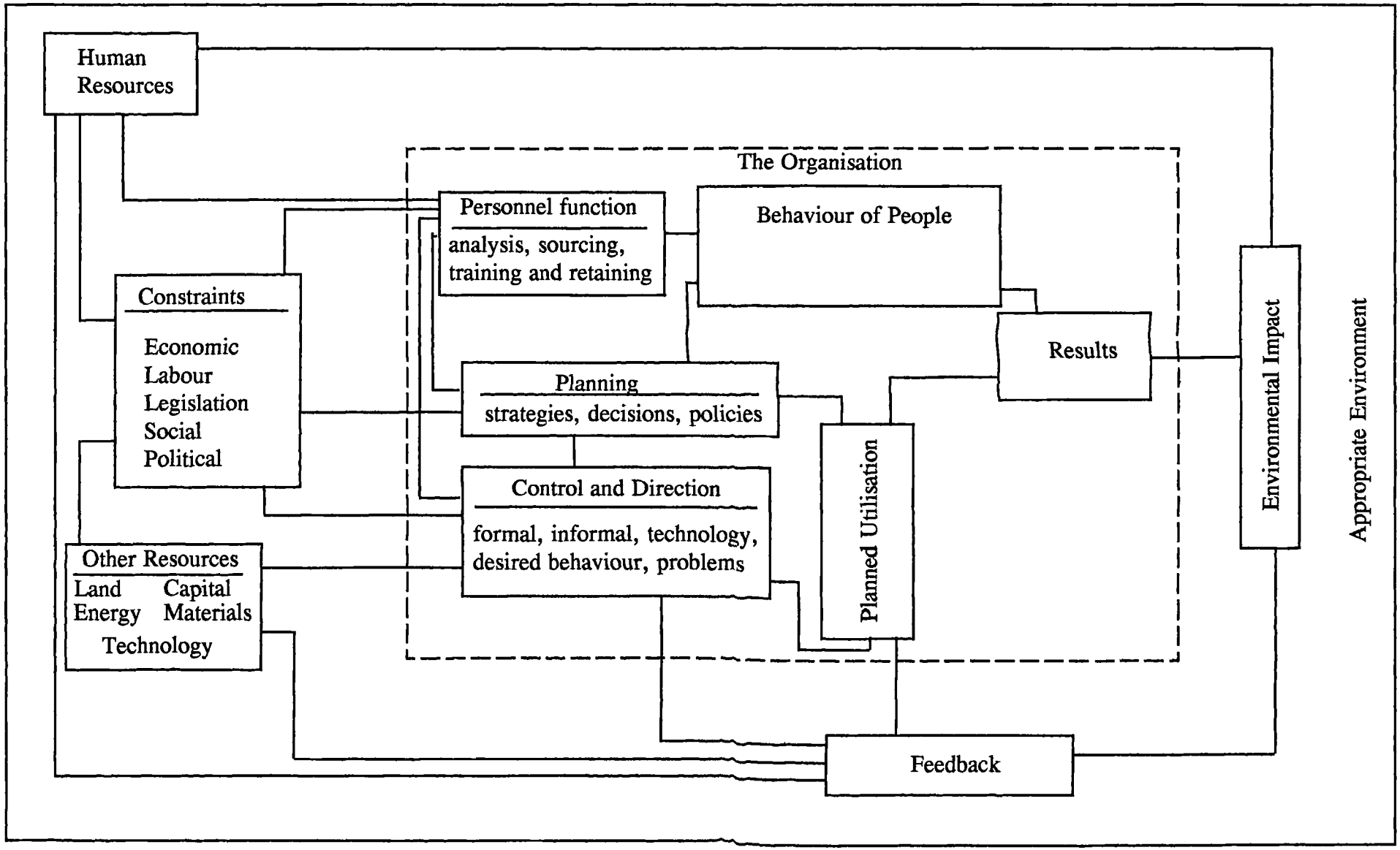

Figure 3.2 **Conceptual Model**

Developed from Torrington and Chapman, 1983, p20

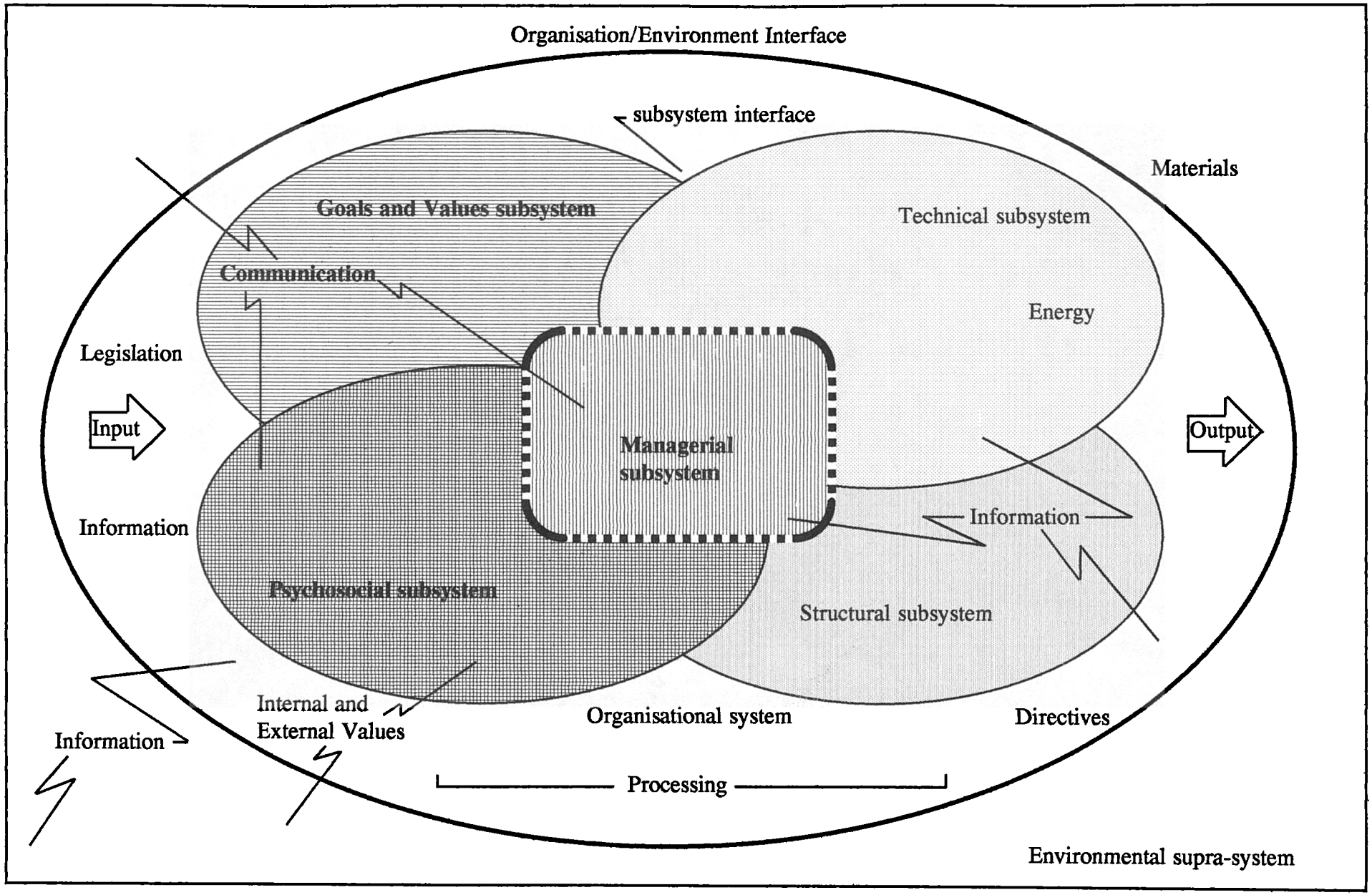

Figure 3.3 Contingency View of the Organisation

Developed from Kast and Rosenzweig, 1985,p17

The organisation must consider interfaces between itself and the employee, and also itself and the wider environment. These interfaces will be non-static and as each interface reaction occurs so its nature may well be unique or similar to previous reactions. The organisation is required to accommodate each interface reaction and to manage these reactions in such a manner that the organisation receives the fullest utility from them. Each of these figures serves to reinforce the notion that interactions within the organisational framework are of an immensely complex nature with many variables acting upon each other, sometimes simultaneously. The identification of the various subsystems and the resulting interactive processes demands that management be aware of, and fully able to control outcomes and performances.

Manpower at all levels within the organisation will establish relationships both longitudinally and transversely. Kolb et al (9) discuss how improvements in the effectiveness of an organisation can only be achieved by giving due consideration to the system of relationships among the organisation, the institutions and the professionals that mould it. Bowey (10) contends that "relationships develop through the interpretations which each person puts on the behaviour of the other." Therefore inter-personal relationships and intra-organisational relationships will interact to produce action that the environment sees as the organisation's behaviour. Silverman (11) validly suggests that the organisation itself is derived from the outcome of these inter-personal relationships. Managing these human relationships may well prove to be management's greatest task.

3.2 HUMAN RESOURCE MANAGEMENT

The availability of labour is a clear constraint on the efficient running of an organisation (12,13,14,15,16), in order that the organisation may grow, develop and metamorphose, so the necessary human resources must be available (17,18). Heron (19) noted that in order to accomplish the tasks before them "management must enlist or buy co-operation of workers" People are the workers who must do the things that

management strive to achieve, and in support of this Armstrong (20) saw four elemental principles in the approach to management of human resources:

i) the most important asset of an organisation is its people; they must be managed effectively.

ii) corporate objectives and strategic plans must interface with personnel policies and procedures.

iii) organisational culture influences the ascertainment of high standards.

iv) human resource management is an integrative process.

Therefore from these four basic elements it is clear that humans operating within an organisation must be considered under an holistic approach. Livy (21) perceived that any demands placed on manpower were derived from interaction with other organisational activities. Clegg (22) reinforces these views noting that:

employees are considered an asset rather than a liability.

the individual interacts with other workers and the organisational culture.

the individual, if managed properly, will strive to attain company goals.

3.2.1 Organisational Strategies and Human Resources

Johnson and Scholes (23) see that development and implementation of strategic decisions involves the matching of the organisation's activities with the available resources. Taylor and Sparkes (24) further subdivided the needs of strategy development and implementation suggesting that it strove to: improve co-ordination amongst divisions, achieve diversification, anticipate change, and also, to ensure that resources were allocated rationally. Penrose (25) emphatically states that the function of both the market place and the organisation is to apportion resources.

The emphasis of control over the organisation's resources is highlighted since it may well be that the very success of the organisation is dependent upon the employment of these resources. Kumar (26) perceived the limitations placed on the success of the organisation by the available resources and also how these resources influence the direction taken by the organisation. Glueck and Jauch (27) underline the need for correct and precise application of resources to reinforce strategic choices.

Hillebrandt (28) suggests that human resource considerations may well usurp the profit-maximisation approach to the objectives of the organisation. This is supported by Bull (29) who argues that whilst profit may well be one of the objectives of the organisation, the welfare of employees is as important as liquidity and survival.

3.3 MANAGING PEOPLE

Cuming (30) and others (31), assert that the prime function of the Personnel Manager is to obtain the best staff for the organisation. McBeath (32), and Haimann et al (33) also attach a high degree of importance to attracting the appropriate personnel types at the most advantageous price and on time.

Barber (34), Hunt (35), and McBeath (36), argue that the quality of the workforce and the management of this workforce may well account for differences both inter-organisationally and intra-organisationally. Torrington (37) noted that studies (38,39) of the interaction between organisational structure and employee performance, along with the relationship and interaction of organisation and employee morale has modified the judgements made towards the notion that the body of management and their organisation must develop, not in isolation, but as a simultaneity.

3.4 ORGANISATIONAL BEHAVIOUR

The basic premise underlying the comprehension of organisational behaviour is the study of the psychosocial system within. It endeavours, through research, observation

and theoretical supposition, to analyse and understand the attitudes, feelings, perceptions, behaviour and motives of those people within the organisation framework (40,41,42,43) and theories of how and why people behave in organisations abound (44,45). Boot (46) noted that significant emphasis (47,48) had been placed upon human relationships at the workplace and the impact of these relationships upon productivity. Hackett (49) illustrates in her "two-way flow" Figure (Figure 3.4) the influence of organisation members upon other constituent members.

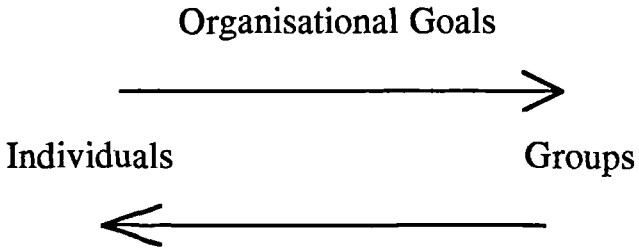

Figure 3.4 TWO-WAY Flow

Individuals come together to form the groups. In doing so, the individual will take with them into the group an established set of values, goals, roles, norms and desires. This set of values will be modified somewhat by the individual's inclusion within the group and, the individual will also seek to modify the group's established set. Both of these organisational members will form part of, and endeavour to modify the behaviour seen as belonging to the organisation.

Motivation is one specific theoretical area in which behaviour is analysed, and whilst Motivation & Job Satisfaction are not the sole subject matter of this research they do, nonetheless, appear as significant factors in determining why an individual may respond to, or vacate, a particular opening (50,51). Consideration is therefore given to the advocates of underlying 'needs' and the attainment of satisfaction.

Ribeaux and Poppleton (52) consider motivation as the 'power house' of man, ultimately, they conclude we do things because we are so motivated either by election or applied force. Dessler (53) concurs with this basic premise and expands more fully on the impact motivation has on behaviour and behavioural modification.

3.5 WORK, REST and PLAY

When considering the human within the organisation, a basic question which must be asked is why does the human work?, and what ensures that the organisation receives the maximum benefit from employing the individual?

In considering this question Morse and Weiss (54) deduced that work is more than simply an income provider. They noted that the act of working provided:

i) unification with society as a whole.

ii) a purpose in life.

iii) achievements worth attaining.

iv) utility of the individual.

Drucker (55) reinforces this conclusion by saying the worker "demands, over and above economic returns, returns as an individual, a person, a citizen". He further describes the demands placed on the organisation by the "whole man" as including: fulfilment of societal promises, attainment and maintenance of high performance standards, exhibition of managerial competence, and that the work itself be earnest and material. Brown (56) emphasises that "work is the source of man's most basic satisfaction, it is his social catalyst, the purveyor par excellence of his status and prestige among his fellows". Taylor and Sparkes (57) see manpower as desiring three ingredients in a job:

intrinsic challenge along with mental and physical taxation.

the recognition due for above average performance.

personal advancement and growth coupled with mercantile surety.

Argyle (58) noted that people differed in their abilities, social performance, interests and motivation. He discusses that whilst an individual may have the necessary attributes for a specific job, they must desire to do the job, if not, then they may be ineffective and derive little satisfaction from the work.

Boot (59), and Cole (60), suggest that the acceptance of a loosely defined description of need, allows the adoption of a basic motivational model (Figure 3.5) upon which the understanding of motivation at work may be founded.

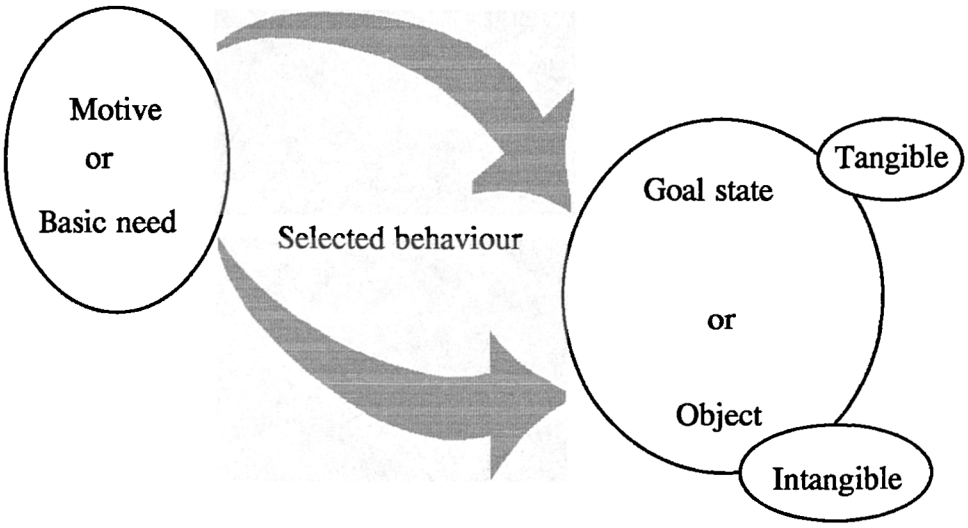

Figure 3.5 Motivation Model

From this basic model it is seen that there is a direct linking pathway between the motive, or basic need, and the goal state or object to be desired. The selected behaviour or activity will be directly related to the goal state or object, whether it be tangible or intangible. Other writers, especially the Expectancy Theorists, have taken this basic model and developed it, and considered further the behaviour or activity selected.

3.5.1 Motivation and Job Satisfaction: Protagonists/Theories

Motivational theory may be bisected into two main schools (61,62,63), Process Theories and Content Theories.

The Process Theories endeavour to explain the fundamental processes through which motivation takes place. They proffer certain basic terms such as 'reinforcement', 'incentive', 'expectancy' and then draw specifications as to how these variables might interact and lead to motivation.

The second group of theories 'The Content' are perhaps more generally considered under the 'needs' heading. They seek to answer questions asking: What are the basic needs people try to satisfy? What incentives are the more potent, etc?

Whilst viewed in isolation, each of these theory groups appears to search for divergent ends, they do however have common features:

1. they aim to explain motivation; and,

2. they interrelate to build a general theory of motivation.

A discussion of the main protagonists' theories of motivation and job satisfaction aids in understanding the behaviour of human resources within the organisation.

Two well researched Motivation Theories worthy of note are: **The Needs Hierarchy Theory** of Maslow and **The Achievement Motivation Theory** of McClelland.

Maslow's theory implies that the management control and adopted systems should be founded on individual interest in needs fulfilment, which varies with time and conditions, and indeed, from individual to individual. McClelland suggests that the individual will be influenced by a desire for success, a search for power and the longing for affiliation. Therefore an adoptive management control system must be based on these motives. Another general theory worthy of initial scrutiny is that attributed to Katz.

Katz's (64) three behavioural types reinforces both these theories and in some respects attempts to bridge between them. He describes the three types as:

i) inducement of the individual to enter and remain within the organisation.

ii) execution of role assignments within tolerances.

iii) achievement of organisational objectives whilst still maintaining individualism.

The first of these three descriptive types supports Maslow's "social" need and McClelland's "affiliation". The second descriptive type is congruous with McClelland's "success" i.e. achieving goals. The final descriptive type correlates with Maslow's "self-fulfilment" and also McClelland's "success". The initial introduction to motivation shows the impact it may have on the individual and the organisation and leads to consideration of the matter in some depth.

3.5.2 The Work of Maslow

Maslow (65) postulated a hierarchical order of needs which influence the individual's behaviour. A hierarchial order is suggested because man is perceived as a creature of distending needs. Satisfaction of the basic biological needs prompts other more complex social and personal desires to assume prepotency. A lower need does not require 100% satisfaction. When needs have been fairly well met, they no longer maintain strong motivational force and the efforts of the individual will be directed towards the satisfaction of needs at the next successive level of the hierarchy. As each needs level in the hierarchy is sated, so the individual's goals change. The hierarchy proposed by Maslow is illustrated in Figure 3.6.

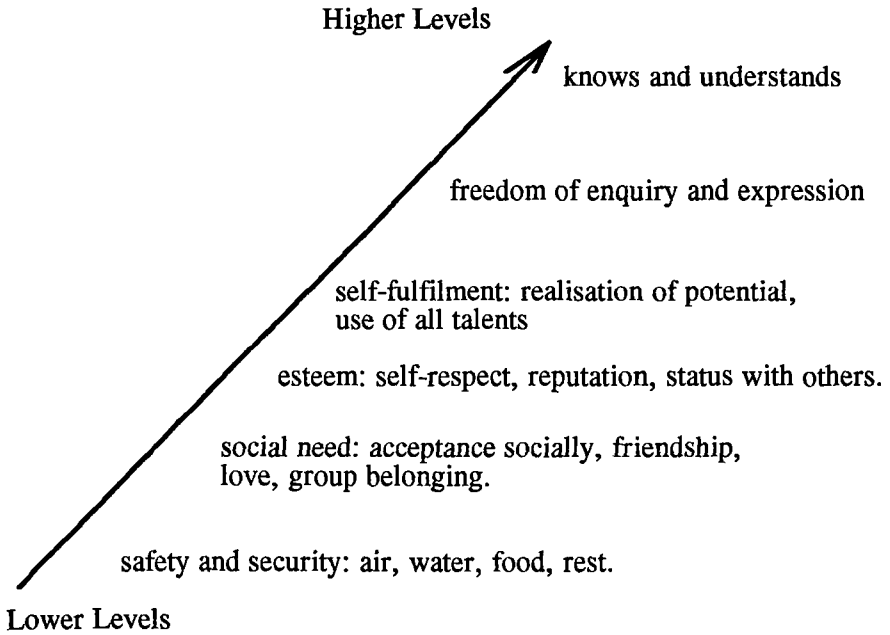

Figure 3.6 Maslow's Hierarchy

Maslow argued that, in a society with a high standard of living, the majority of people regularly satisfied the lower three needs levels and thus negated the motivational effects of these levels. Therefore industry should concentrate application of effort towards meeting the needs in the two uppermost levels. Fraser (66) supports this drive for action directed towards "satisfaction of the higher order needs".

Friedlander (67) considered Maslow's hierarchy and supported its structure by noting that workers in 'blue-collar' jobs tended to emphasise such work values as pleasant co-worker relationships, acceptable worker-supervisor associations, and job security. Workers in 'white-collar' jobs placed greater emphasis on the available opportunities for self-expression, achievement, and stimulating, challenging work. Cole (68) asserts that Maslow's theory has provided a useful framework from which to discuss the variety of needs encountered by workers and how motivation may be achieved. Argyle (69) asserted that the main corroborative evidence for the needs hierarchy comes from the lower needs in the hierarchy and that there is cryptic evidence for the uppermost needs, although the basic premise of the theory in terms of satisfaction, rests on its emphasis on self-actualisation.

Hackett (70) suggests that Maslow's hypothesis is faulted by the building in of a value system within the hierarchy. The degree of respectability attaching to a higher order need becomes more prominent than that attaching to a lower order need such as monetary recompense. She further argues that, whilst Maslow suggests if a need is met it will remain so indefinitely, this is not always factual. Warr and Wall (71) discussed the vagueness of Maslow's theory and the structural ordering given to the hierarchy. They saw the theory as being acceptable with regard to white-collar jobs, but unpalatable when viewing manual work. Warr (72) said that the notion of a hierarchy of some form is indeed plausible but empirical evidence supporting and testing predictions from the theory, is lacking. He cites Wahba and Birdwell (73) along with Wanous and Zwany (74) as sources of evidence which does little to support Maslow's theory. Schien (75) expands on how the underlying strength of Maslow's theory may be seen to be the attention afforded to the variety of needs and

motives which are operational, but the evidence for the hierarchic notion is fragile and the need categories appear to be encyclopaedic. The example of self- actualisation is cited, wherein it may be achieved in many different ways and the precise meaning of self-actualisation may be non-static under the influence of developmental stages, so the knowledge that everyone is concerned with achieving it may be of little worth. Dessler (76) cites the research findings of Hall and Nougaim (77) along with Wanous (78) as non-supportive of the five level hierarchial structure and suggests that a two level hierarchy is more indicative. These two levels being structured such that "security" needs are at the base and "higher needs" on top. The basal needs equate closely with Maslow's three lower elements and the higher needs corroborate Maslow's top two elements.

Dawson (79), Hackett (80), Warr (81) along with Ribeaux and Poppleton (82) suggest that Alderfer's (83) E.R.G. theorem, (existence, relatedness, and growth) offers some relief to the difficulties associated with Maslow's theories. Alderfer's continuum within the straight line relationship allows flexibility in the directional travel of the individual. Hackett illustrates the relationship between Maslow's 'needs' and those identified by Alderfer (Figure 3.7) demonstrating the support afforded the basic tenets of 'Content Theory'.

3.5.3 The Work of Herzberg

Herzberg et al (84,85) perceived satisfaction and dissatisfaction as representative of two quite independent dimensions of man's nature. Satisfaction stemmed from quite different sets of factors than dissatisfaction. Satisfaction is sought in aspects of job content e.g. advancement, achievement, etc, that provide for growth in the individual and equate closely to Maslow's higher needs. These Herzberg called the "satisfiers" and have been labelled motivators by many subsequent writers (86,87,88). In general, these factors form an integral part of the performance of the work. The factors identified as being strong determinants of job satisfaction are:

- responsibility
- advancement
- achievement
- the work itself
- recognition

These factors are intrinsic to the job and their absence will not cause dissatisfaction, but rather, lack of satisfaction.

Dissatisfaction derives from a different range of factors termed "dissatisfiers". Their tendency is to act in a negative direction and they are contextually on the periphery of the job itself. These factors have long been the foundation from which managers have traditionally directed their efforts towards motivating the workforce. Included within these factors are;

- working conditions
- company policy and administration
- peer relationships
- supervision
- job security
- remuneration

Herzberg, using a medical analogy, labels these factors "hygiene" or "maintenance" factors; they are extrinsic to the job itself. A shortfall in the level of these factors leads to dissatisfaction. Surfeit on the other hand, would not lead to job satisfaction, but merely no dissatisfaction.

When compared with Maslow's hierarchy, the dissatisfiers relate closely to the needs falling within the lower three levels. This then tends to support the implicit contention of Maslow that the lower level needs proffer little motivational effect when a high standard of living exists.

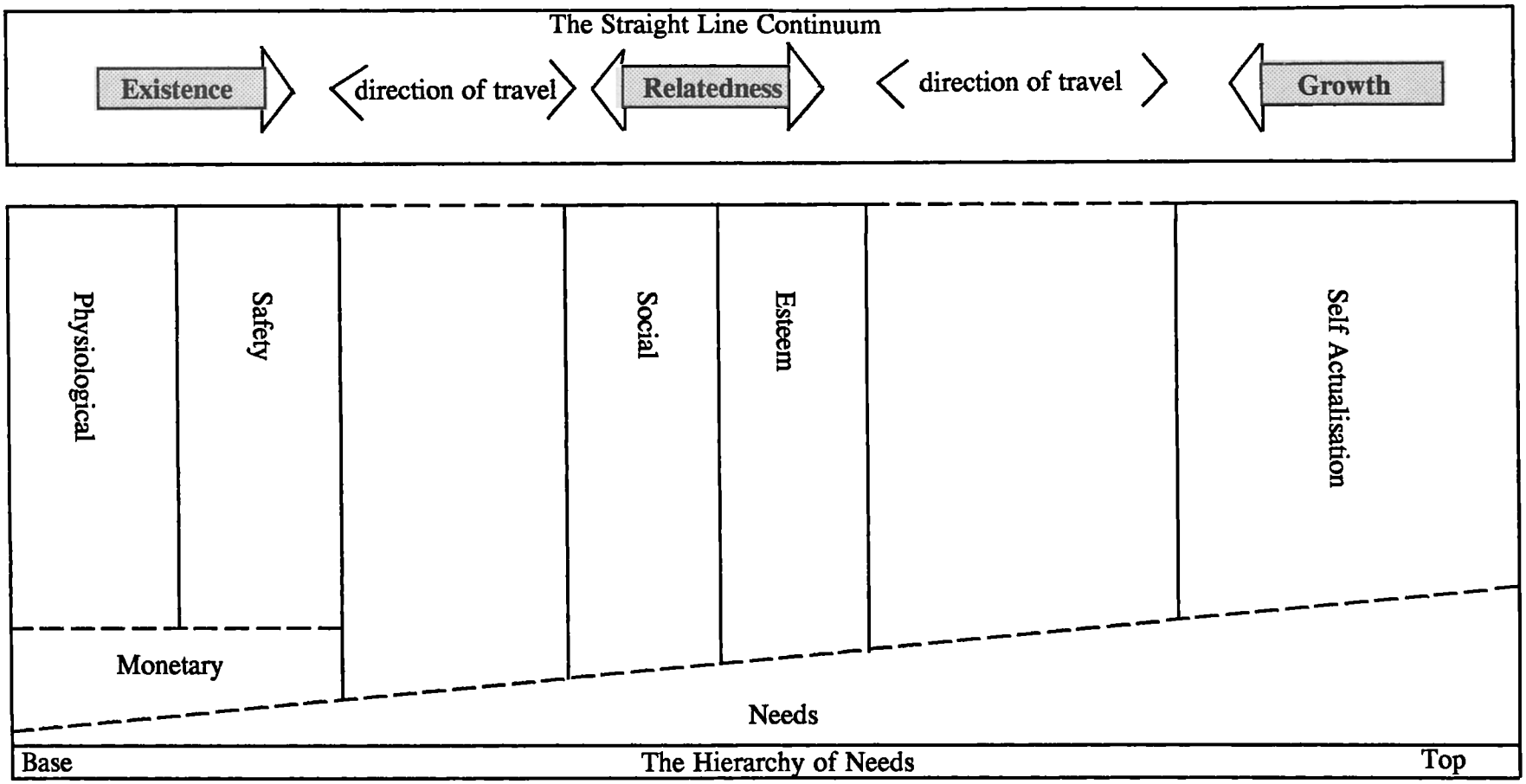

Figure 3.7 **Maslow - Alderfer Interface**

Developed from Hackett, 1985, p133

From Herzberg's studies, the suggestion is made that the dissatisfiers will rarely act as satisfiers although, under the correct conditions, satisfiers may induce dissatisfaction e.g. where recognition is not forthcoming. In order to achieve maximum effect from the satisfiers there should be a lack of active dissatisfiers. Dissatisfiers which are present will be negated by the satisfiers.

Boot et al (89) state that, "while it is important to get the hygiene factors right, if the manager wants to motivate his employee, he should focus his attention on the job itself and attempt to manipulate the motivator factors". This statement is supported by Myers (90) who sees an environment which is rich in 'satisfiers' as one which will stimulate employee development and a sparsity of such opportunities leading to a preoccupation with the dissatisfiers.

Improved motivation and satisfaction may be attained by developing; the nature of the work itself, the degree of responsibility given, the recognition offered, enhancing the opportunities for achievement and/or advancement. Mawhinney (91) suggests that extrinsic hygiene factors should not be completely ignored since both intrinsic and extrinsic factors are considered as interacting with each other (uniquely to each individual) to produce overall motivation. Nord (92) emphasises this point by suggesting that there is a great deal of support for the proposition that money, job security, working conditions etc, are important to a large number of workers. He goes on further, noting that the economic pay-off from work i.e. monetary, may frequently be the main focus of concern rather than rewards stemming from prestige or intrinsic content of work. This is partially corroborated by McDougall (93) who indicated from his study that financial reward assumed a position of significance as a motivator.

Many writers (94,95,96,97,98) have considered Herzberg's ideas and whilst applauding the basic pattern (99) they nonetheless offer severe criticism. McKenna pours scorn on the suggestion that such a rigid distinction may be drawn between

hygiene factors and motivators. He further goes on to cite the work of House and Wigdor (100) wherein they discuss the methodological and sample errors induced into the study from respondent's bias and lack of controlled conditions. The range of occupations considered was deemed to be too narrow by Ewen. He further saw the use of only one measure of job attitude, the lack of reliability or validity of data, and the apparent contradiction of some factors (e.g. salary, which is a hygiene factor, but may in fact be viewed as a recognition of work well done i.e. a satisfier) as areas of major criticism. Dessler (101) also addresses the problem of factor ambiguity stating that "Herzberg's insistence on the idea of two uni-polar continua seems indefensible, both logically and empirically".

Further research is called for in a wide diversity of cognate occupational situations in order to fully test and apply Herzberg's theory. The nature of satisfiers and dissatisfiers (if this is the correct labels for the variables) is complex and the interaction of each set with the other, and the individual, along with the influence occupational type has on the whole equation demands that no attempt be made to generalise Herzberg's theory as being applicable to all situations.

3.5.4 Subsidiary Theories

As discussed earlier Motivation Theories have tended to be allocated within two main subsets. These two subsets are not the exhaustive thoughts on this area of management, indeed several other theories are gaining ground and are therefore worthy of discussion.

Lawler (102) drew on the work of Vroom and others to construct his model of motivation wherein the employee's motivation is seen as being a function of variables:

First:

Effort-Reward Probability, which seeks to quantify the individual's perceived probability that x units of effort directed towards performing effectively will result in achievement of a given reward or outcome which has attaching positive value. Lawler noted that this variable was in itself subject to two further influences: the probability that effort will result in performance and also that performance will achieve the reward. Vroom (103) labelled these subsidiary variables as "expectancy" and "instrumentality", respectively.

Secondly:

Reward Value (Valence), evaluating the individual's perception of the reward or outcome which may be achieved by appropriate action and performance. The argument is put forward that many outcomes have reward value stemming from the fact that the outcome is in some manner able to satisfy singular or multiple needs. Thus the work of Maslow (discussed earlier) may well serve as an underpinning theory to 'Expectancy'. Care must be taken to note that not all employees will derive the same value from each outcome and therefore, be unable to fully satisfy, or over satisfy a particular need.

Lawler's work demonstrated that the effort exerted by the employee is determined by the interaction of: the belief that the required performance can be attained; and, the belief that performance as desired will lead to reward; and, the value attaching to the reward, i.e.

Effort ⟶ Performance ⟶ Reward ⟶ Satisfaction

The employee's expectancy of converting effort into performance is a function of the employee's ability, skills and knowledge. All individuals have varying quantities of each of these, and in themselves these attributes change through time. Therefore as these attributes increase and are enhanced, so too the employee's expectancy that the effort will lead to the desired performance.

In the recruitment process this aspect may show up directly with the employee's displayed, and perceived confidence. The high levels of the appropriate skills, abilities and knowledge supports the individual's belief that the desired performance i.e. securing the post, is attainable. Therefore greater effort is directed to securing the post and so the process may in some ways be seen as self-supporting.

With the position secured, the employee is placed in a situation where resources will require to be drawn on in order to execute the tasks before them. Lack of the requisite resource will modify the employee's perception of the ability to perform as required. Also, in order that the employee might execute the task required, instructions as to what must be carried out are to be given. If this information is defective or lacking in clarity, then the employee's certainty will wane. Therefore 'Expectancy' is subject to many subtle influences which may bring about fairly significant changes in the individual's displayed motivation. The motivation then is seen as being derived from the composite function:

$$\mathbf{M = E \times \Sigma (I \times V)}$$

where E is Expectancy, I is Instrumentality, and V is Valence

As stated earlier, the employee's skills, attributes and knowledge, needs and demands are non-static. So the motivation levels exhibited will vary from time to time and from situation to situation. The many factors considered all lend weight in determining that $M=Ex\Sigma(IxV)$ should be chameleonic and extremely complex. Dillard and Ferris (104) utilise Expectancy Theory when seeking to quantify the individual's decision processes at, or during, 'migration' from one employer to another, and clearly demonstrate the complexity of the problem facing the researcher. Newsom (105) when formulating his model, based on Expectancy Theory, took the basic content and substantially added to it. He saw the reality of the expectancy theory as being summed up by "The 9 C's" being:

Capability, Confidence, Challenge, Criteria, Credibility, Consistency, Compensation, Cost, and Communication.

The first three C's deal with the individual's perception as to the relationship between effort and performance:

Capability- is the individual capable of performing the job well.

Confidence- does the individual believe that they can perform the job well.

Challenge- does the individual have to work hard to perform the job well.
The remaining C's may be described as follows:

Criteria- does the individual know the difference between good and poor performance.

Credibility- there must be belief in promises being fulfilled.

Consistency- all employees are receiving similar preferred outcomes for good and poor performances.

Compensation- do the actual outcomes associated with good performance reward the individual, sometimes more than in simple monetary terms.

Cost- what is the cost to the individual of expending effort and of the outcomes foregone.

Communication- good communication is seen as being essential to the effective operation and use of the other eight C's.

When these nine C's are superimposed upon the basic Expectancy model we now arrive at a significantly more complex, yet realistic, model of this theory. Indeed its very complexity now suggests that it is eminently suitable for use directly in the construction industry where fluidity is almost the watchword. Figure 3.8. illustrates the amended layout of the basic theory and the C's.

Alderfer's grouping of needs into three basic categories (discussed earlier in 3.5.2) provides the potential for measuring the quantity of each need an individual has at any specific location in time. The approach acknowledges the underlying possibility that not everyone will have a comparable magnitude of each of the basic needs, as implied by Maslow's theory.

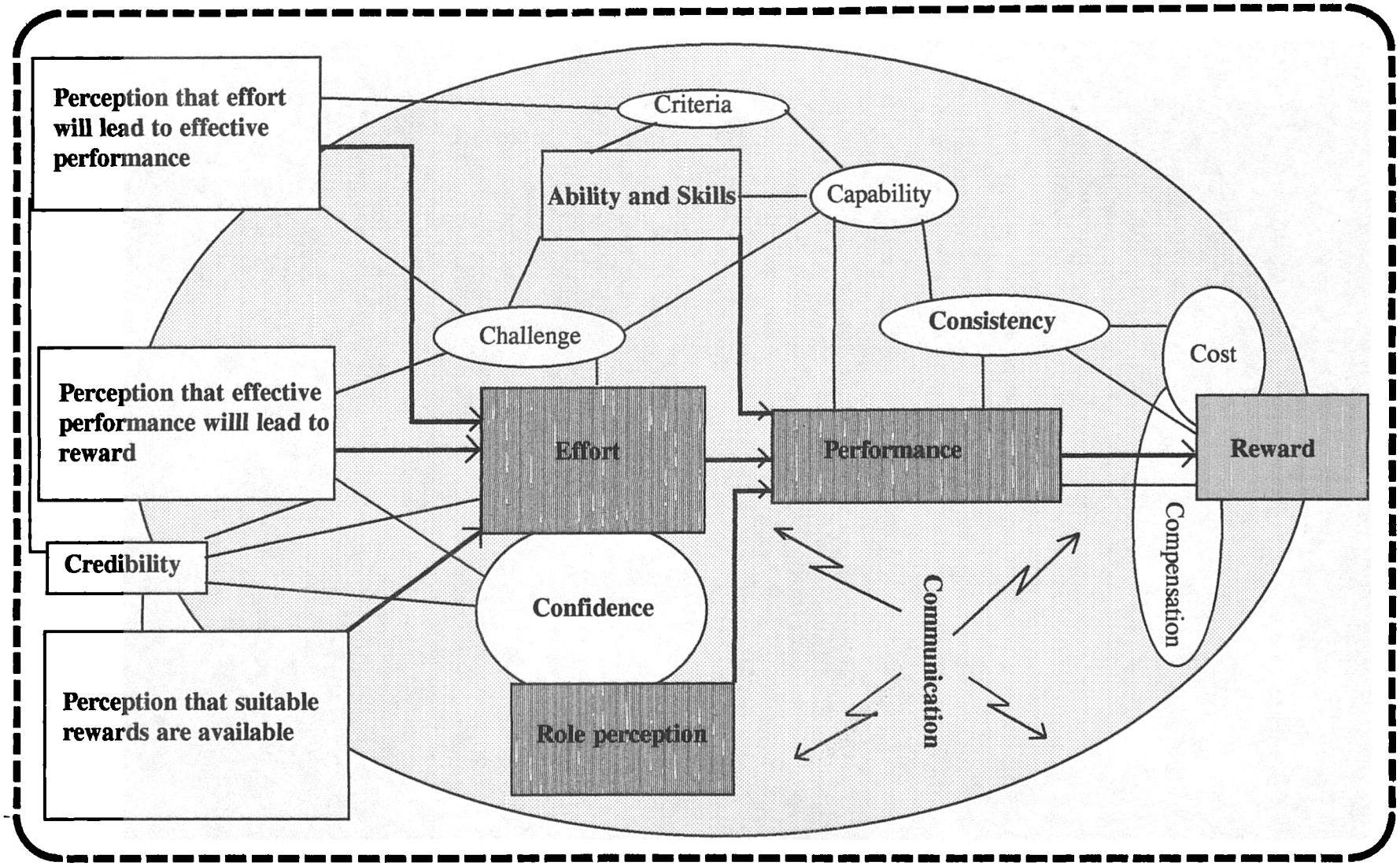

Figure 3.8 The Influence of the 9 C's upon Expectancy

Vroom saw economic and non-economic factors as the two broad reasons for an individual's activity. In his view, job satisfaction is considered in terms of the attractiveness of a particular job, and the rewards to be obtained from the job (106).

The Classical organisational theorists (Taylor, Gantt, etc) assumed that the individual had to be driven to work by means of the carrot and the stick. Economists (107,108) in their concept of economic man still maintain a similar view and whilst the Human Relations writers (Mayo, Argyris, etc) have generally rejected such a viewpoint, money still remains an important motivator, reaching beyond the realms of biological needs. Incomes Data Services (109) note that salaries may be subject to biannual review along with inducement loadings of 50% or more.

In their analysis, published in 1977, Katz and Van Maanen (110) identified three cognate groups of factors which they labelled the "loci of work satisfaction". These factors were clearly discernible and are described as being derived from the following:

1. the job itself (intrinsic factors)

2. the interaction context (other people and job environment)

3. the organisational policies (pay, working conditions, etc)
(the latter two factors being extrinsic to the job itself)

The workforce of a Japanese organisation (111) perhaps best illustrates that the extrinsic factors are important in the overall motivation and satisfaction equation. The influence of corporate culture and policy along with the 'birth-to-death' relationship (112,113) must impinge upon the individual's overall perception of motivation and satisfaction.

The identification of these factor groups reinforces the theories discussed earlier and underlines the need for consideration of the theories prior to discussion of the sources of manpower and the retention of the recruit. Armstrong (114) saw that for an organisation to reach its objectives it must have the proper work executed with the maximum degree of commitment from the workforce. This commitment could be influenced by adequate leadership, increased motivation, and satisfying the worker. The ability to secure the manpower in the first place is limited by management's cognisance of behavioural aspects such as motivation, aspirations and job enrichment or satisfaction (115). Support is given to this argument by many writers (116,117,118) who have focused on the construction industry and sought to consider the relevance and applicability of such theories to this industry. Understanding of such issues may allow management to better control human resources within the organisation. Bowey (119) sees the manager as being concerned with controlling events occurring within the organisation and in order to exercise this control function they require comprehensive knowledge of the multifarious processes and relationships between variables, from which the incidents they wish to control, emanate.

3.6 CONTROL

The manpower of an organisation consists of individuals with their own economic, physical, psychological and social needs (120,121,122). The satisfaction of these needs will modify their reactions to varying situations. The satisfaction of the individual's needs will lead to greater productivity and greater harmony between the individual and the organisation. This basic premise is supported by, amongst others, Hunt (123), and McBeath (124). Etzioni (125) saw the need to restrain and control the behaviour of the organisation's members, to ensure the performance requirements were attained. This compliance being achieved through the organisation's control structures and motivation of the individual.

Wieland (126) succinctly states that control may be defined as "obtaining desired behaviour from another person". Anthony et al (127) corroborate this statement and apply the definition more liberally to include also machinery and equipment, being directed towards the attainment of objectives or goals. Weiner (128) discusses the process of control in greater depth and the essential elements are illustrated in Figure 3.11.

From this Figure it is clear that several essential features exist within a good control system, namely;

i) a method or device which will observe or detect and measure activities or events which are under consideration and may be the focus of control: and

ii) some format for assessing and evaluating the performance of the activity or event. Standard performances are a pre-requisite in order to allow comparisons to be made; and

iii) a device which will enable alterations or changes to be made to performance; and

iv) a communication network enabling information flow among the various component parts.

Essential to the successful operation of the control system is the feedback loop. The interrelationships and effects of each component are monitored via this channel.

Johnson and Scholes (129) acknowledge Dalton (130) as the source of three methods whereby individuals may be controlled, namely: Organisational, Social, and Self. Figure 3.9 outlines these controls acting upon the individual.

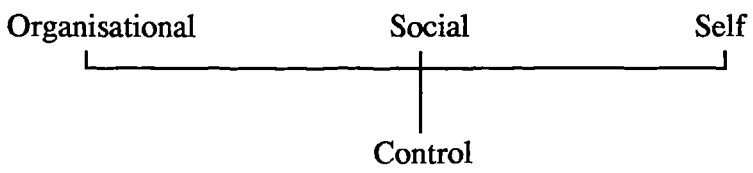

Figure 3.9 Individual Controls

Figure 3.10 expands on the basic skeleton, considering some of the specific forces which may act upon the individual.

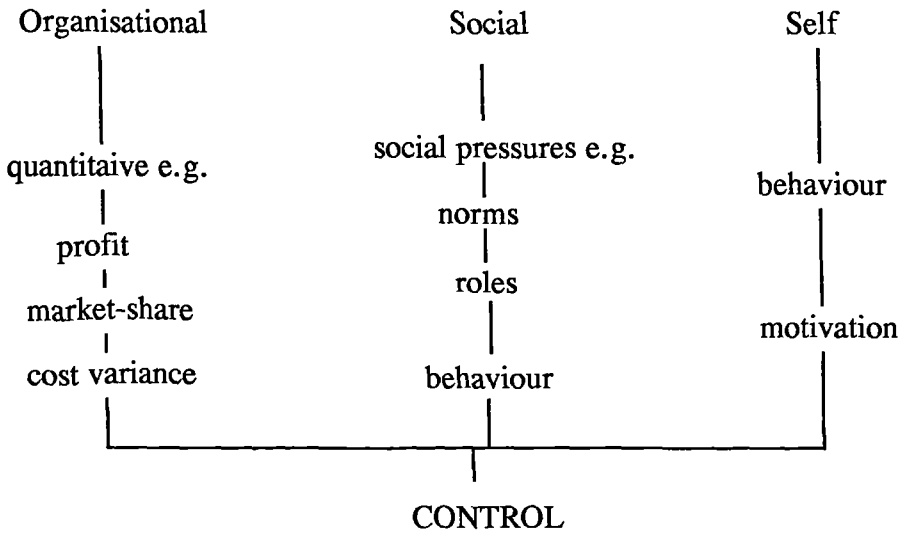

Figure 3.10 Control Forces

Whilst it is clear that the many forms of control do exist, the exact quantity of any one form acting at any one time will be dependant upon several factors, not least of which is the individual themselves.

Motivation is seen as a primary method whereby the organisational member may be controlled. The various attempts at inculcating this "self-control" within the construction industry's members have led to many disputes and caused much ill feeling. Many factors will work together to produce inertia from the individual. The action seen will vary from time to time and from situation to situation. As such, management must be able to view the overall processes at work and to comprehend the influence that each of the active factors may have upon the individual, whether it be to apply for vacant positions within the organisation, or to withdraw from the organisational framework. To have the individual actually enter the organisational setting is, in some senses, an achievement in itself i.e. have elements of the vacancy raised relevant issues within the individual, for which some form of resolution is sought?

To retain an employee would suggest that many of the underlying areas, discussed within this chapter, are either being sated, or maintained at such a level as make the employee see employment retention, within the organisation, as being a worthwhile outcome of the effort expended and the application of the held skills, abilities and attributes. When the employee no longer sees this as being worthwhile then departure may ensue, or at the very least, levels of motivation will decline. The departure of course being part and parcel of the Turnover process.

The whole issue of motivation and motivation theories still requires much work, especially research which focuses on the construction industry specifically. Much of the research and findings discussed within this chapter emanate from industries which are clearly dissimilar to construction e.g. manufacturing, retail. The individuals who comprise the construction industry workforce are drawn from a disparate background and must carry out their range of duties under conditions which are non-static. The very nature of the industry i.e. its cyclical trends and external influences, and the work itself, encourages a transient workforce, whether the level be managerial or operative, i.e. the location of the project is seldom close to home, and as one project draws to a conclusion so the workforce migrate towards the locus of the next project. Because of the perceived uniqueness of the industry and its workforce, the applicability, directly or otherwise, of motivation theories must be viewed with an element of suspicion. The import of theories into an industry which is such a significant element within the overall economic supra-system must be carefully considered by all involved. Part of management's attention should be focused on the issues underpinning motivation, since some of these factors or forces may have enticed, or driven, the worker to enter the organisation. These same underlying forces may well serve to spur the employee onwards towards greater opportunities or to join organisations which afford the possibility of attaining some desired objective. Should the employee seek the latter, then the organisations' labour turnover rate will increase and may lead to serious short and/or long term ramifications.

Chapter 4 considers in some detail the various aspects associated with labour turnover and its effects on the organisation. It also considers the influences which act upon the organisation in terms of recruitment practices, with specific emphasis on one particular aspect of the recruitment practices. Management's responses to labour turnover are discussed, as are strategies available to eradicate or reduce some of the difficulties emanating from this turnover.

Chapter 4.0

LABOUR TURNOVER

AND

RECRUITMENT PRACTICES

4.1 LABOUR TURNOVER

Labour turnover is present within the construction industry and as such its effects will bear on all organisations and individuals who operate within the industry. The following material provides a definition of turnover and suggests the influence of organisational recruitment practices (specifically recruitment sources) upon labour turnover. The material also brings together the foregoing chapters by showing how motivation theories may affect the individual and ultimately the organisations which make up the industry.

Organisation members will decide to leave, or are coerced into leaving the firm, so giving rise to labour turnover. This turnover may well serve as an indicator of the organisation's state of health (1), and may bestow both positive and negative benefits on the organisation. Dalton et al (2), consider both sides of the argument i.e. functional and dysfunctional as further amplification of the voluntary/involuntary dichotomy. Illustrated in Figure 4.1 are the possible effects voluntary turnover may have upon the organisation.

As a positive benefit, the employee's departure may create opportunities for promotion of others and indeed, bringing in new blood to fill the vacuum may be a prerequisite action to ensure the organisation avoids stagnation and institutionalisation. The negative aspects can be viewed from terms of financial impact and organisational disruption i.e. in work cycles. Financial considerations must take account of: replacement costs, training, induction, loss of output, loss of goodwill, overtime and where necessary, sub-contracting of workload. Burch (3), classifies costs associated with labour turnover under five categories:

Training & Induction
Administrative Costs
Loss of Output
Scrap, Waste & Rectification
Initial Increased Supervision

These costs identified, whilst taking a simplistic approach, illustrate the complex nature of turnover costs.

Loss of goodwill (amongst other facets) is given scant attention by Burch, and yet in an industry with such a high profile, this must be an important aspect in determining future workload, along with the employee, or potential employee's perception of the organisation's image in the community as a whole.

Rothwell (4), and Brayfield and Crockett (5), emphasise the morale of the individual as one of the contributory factors leading to turnover, an exhibition of behaviour. Leavitt (6), noted that three interrelated assumptions may be made regarding human behaviour:

1 Behaviour is caused; and
2 Behaviour is motivated; and
3 Behaviour is goal-directed.

Therefore the individual's or the organisation's exhibition of behaviour, leading to an exit from the organisation, is the culmination of the interaction of these factors

Flamholtz (7) argues that human resource replacement cost may well be an area which is capable of enveloping not only individuals, but also whole cohort groups. Many of those recruiting employees perceive the new recruit as simply a substitute service provider. Roles assume predominance rather than the need to replace the 'whole' person.

A significant proportion of the research executed in this field has focused on manufacturing industries and specifically on the individual unit of provision. The construction industry may be seen as being fairly unique in that it calls for service provision not only from the individual unit, but also seeks provision from the collective, composite, unit e.g. bricklayers in squads of: two tradespersons and one labourer, or three tradespersons and two labourers. It may be argued that the individuals comprising the group perceive themselves as a homogenous entity and will seek employment only under conditions which favour the cohort i.e. employ the squad, not the individual. With the increasing use of sub-contracted labour within the industry, so the need to study in depth their replacement costs.

All values are hypothetical

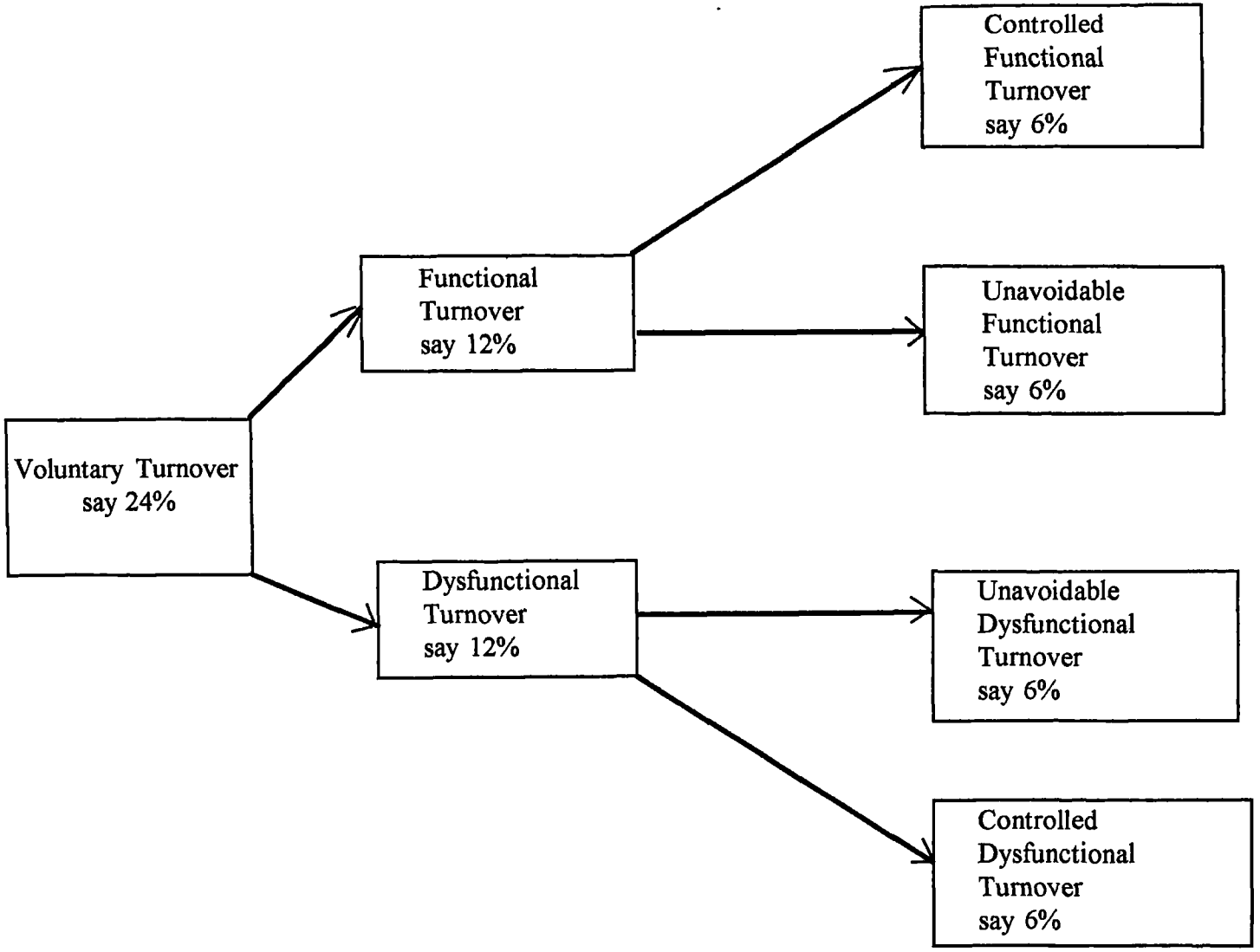

Figure 4.1 Functional / Dysfunctional Taxonomy Source: Dalton et al, 1982, p74

It becomes clear then that an important aspect of human resource management in any organisation is the desire to reduce turnover, and its financial implications, to an acceptable level. Considered along with these areas, is the need to ensure that the correct labour/skill-mix is available at all times. The construction industry with its formative and summative training regimes, coupled with the cyclical nature of the industry, perhaps suffers greater than other industries in skill-gaps (8) (9). Strategic decisions made by management must take heed of manpower planning and the organisation must have information as to the length of service likely from an employee, also the probability of their departure. For any of the industry's organisations, turnover is a powerful tool to be utilised by management. Figures 4.2-4.4 illustrate the nature of manpower levels within several constituent members of the industry.

Analysis of turnover rates and trends will enable accurate planning of future strategies, execution of contracted workload, optimum resource utilisation, reduction in costs and may enhance the image of the organisation itself, if not of the industry generally. Before considering various measures of labour turnover, effects and strategic impact further, it is necessary to establish an acceptable definition of labour turnover.

4.2 TURNOVER DEFINED

Price (10), took for his definition "the degree of movement, exhibited, by individuals across the membership boundaries of a social system". This definition is sufficiently catholic to encompass not only the individual's movement from one organisation to another and intra-organisationally, but also other aspects of the social system itself i.e. unions, industries. Price's definition is much too expansive and therefore leads to the development of a definition much more organisationally specific. Hence Rothwell's (11), description is considered suitable for the needs of the thesis. Rothwell sees labour turnover as being "the total movement of people in and out of a company", and this is given support and reinforcement by Gupta and Jenkins (12).

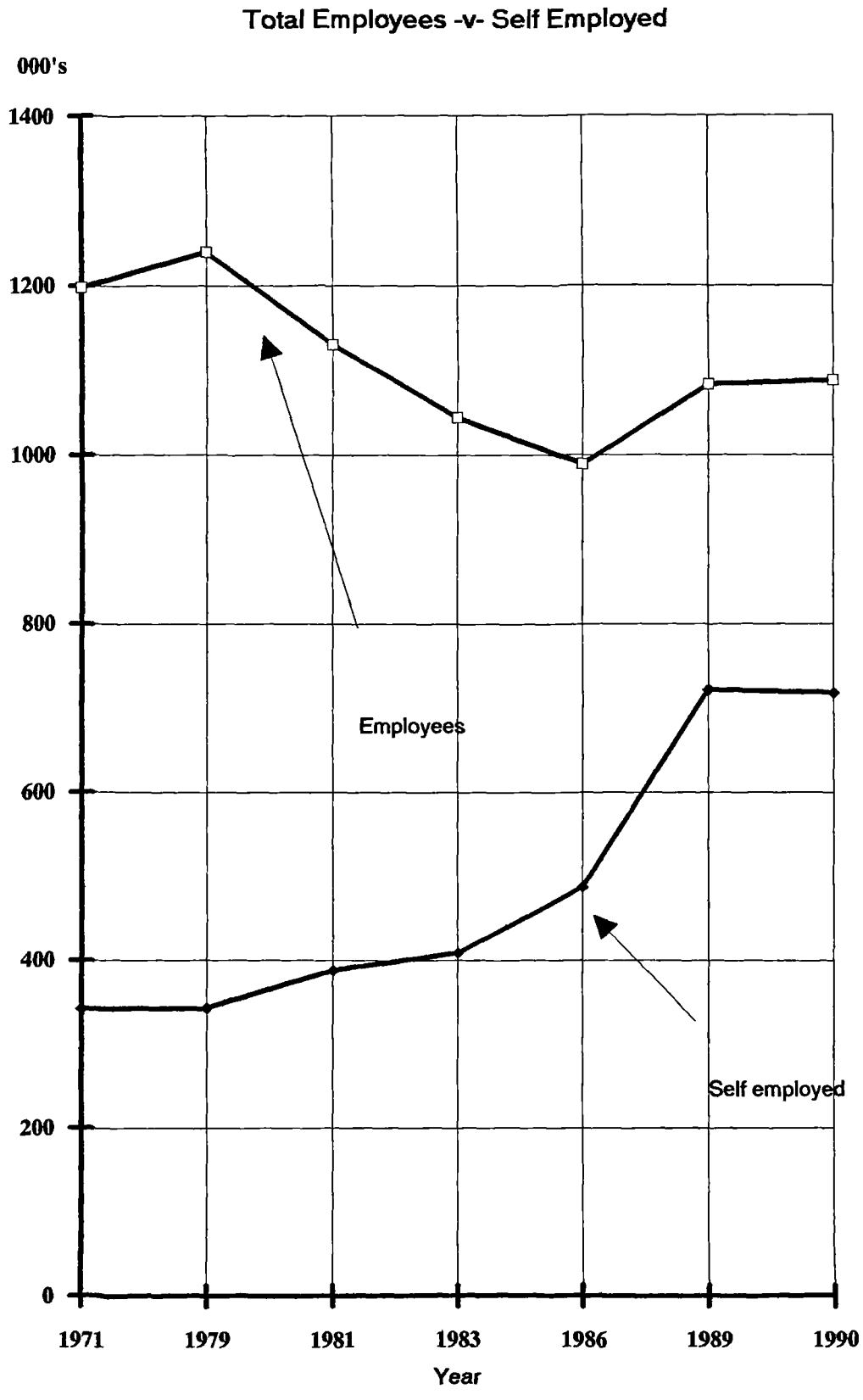

Figure 4.2

Source: Social Trends 22

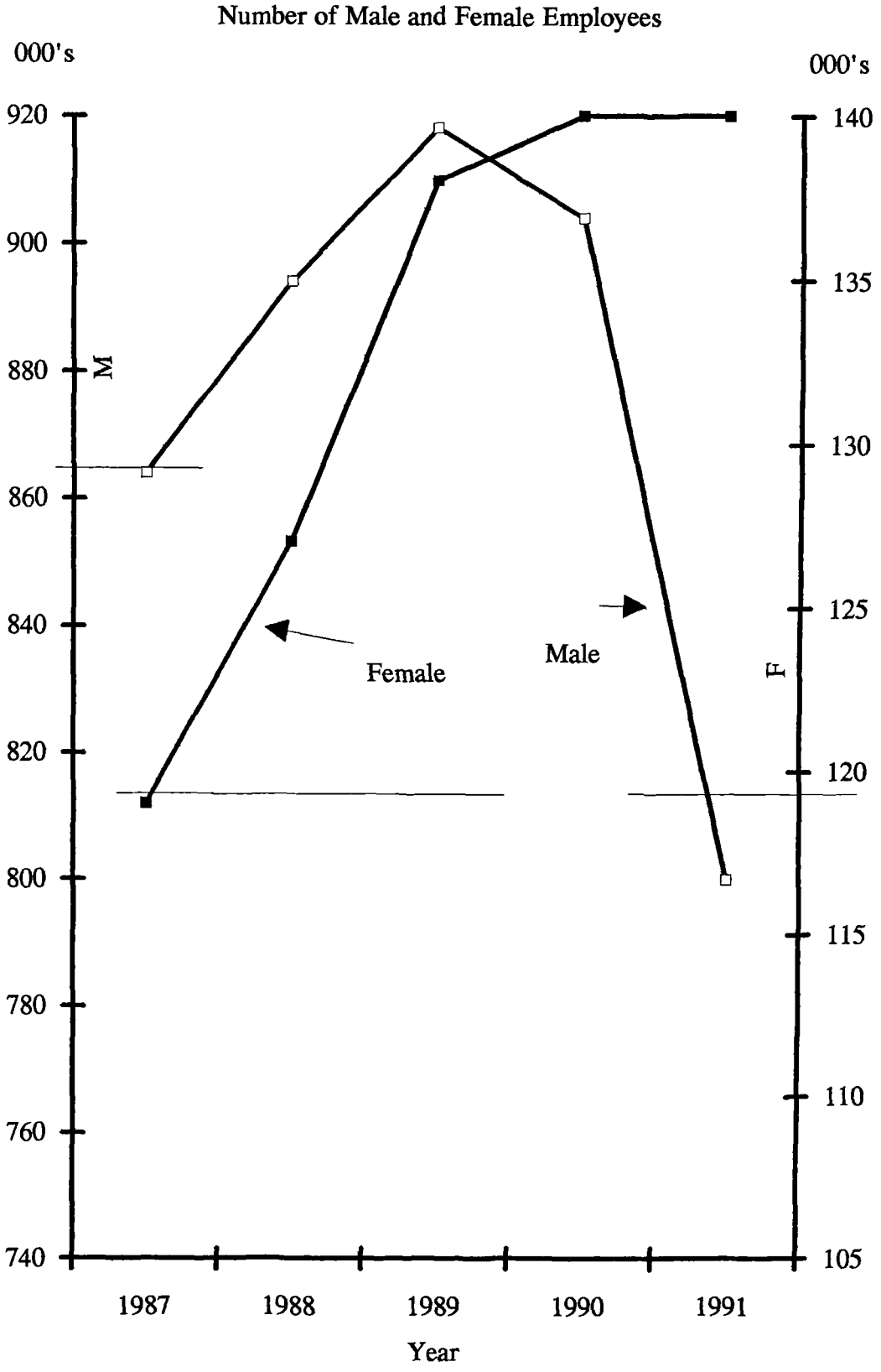

Figure 4.3 Source: Statistics Division, Employ

Employees in Types of Organisations

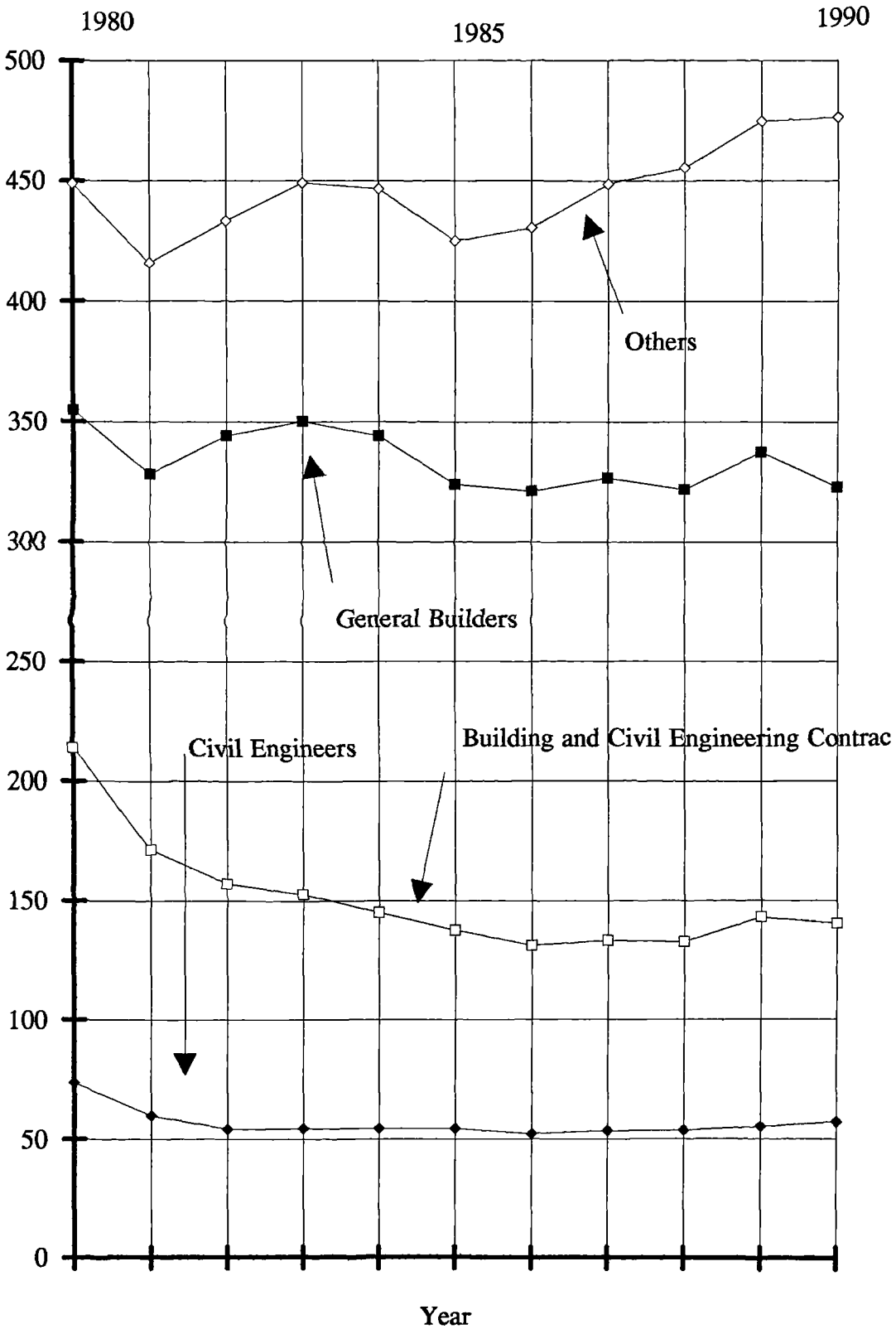

Figure 4.4 Source: Statistics Division, Employ

With this continual accession and departure, labour turnover must be considered dynamic and this dynamism has prompted writers to consider labour turnover as a 'process'. Figures 4.5 and 4.6 illustrate the elements contributing to both high and low turnover.

Bucklow (13) saw the 'process' as being resultant from the interaction of:

a) the organisation, and

b) the individual, and,

c) the employment field.

Parnes (14), when viewing the turnover 'process' identified two basic processes whereby the supply of labour may adjust to fluctuations in demand.

The first requires a relatively long time frame and involves external factors such as, technological change, which alters the diacritical rates of accession to the various employment opportunities. Wellman (15), notes that the demand for labour is a derived demand and emanates from "the demand for goods or services which the enterprise supplies and is moderated by the technology employed". Burns and Stalker (16), in their study, noted the full impact of particular technological innovation on a specific labour force.

The second basic process identified by Parnes requires a much shorter time span and involves those already within the labour pool, responding to perceived changes in the skill-mix demanded by employers.

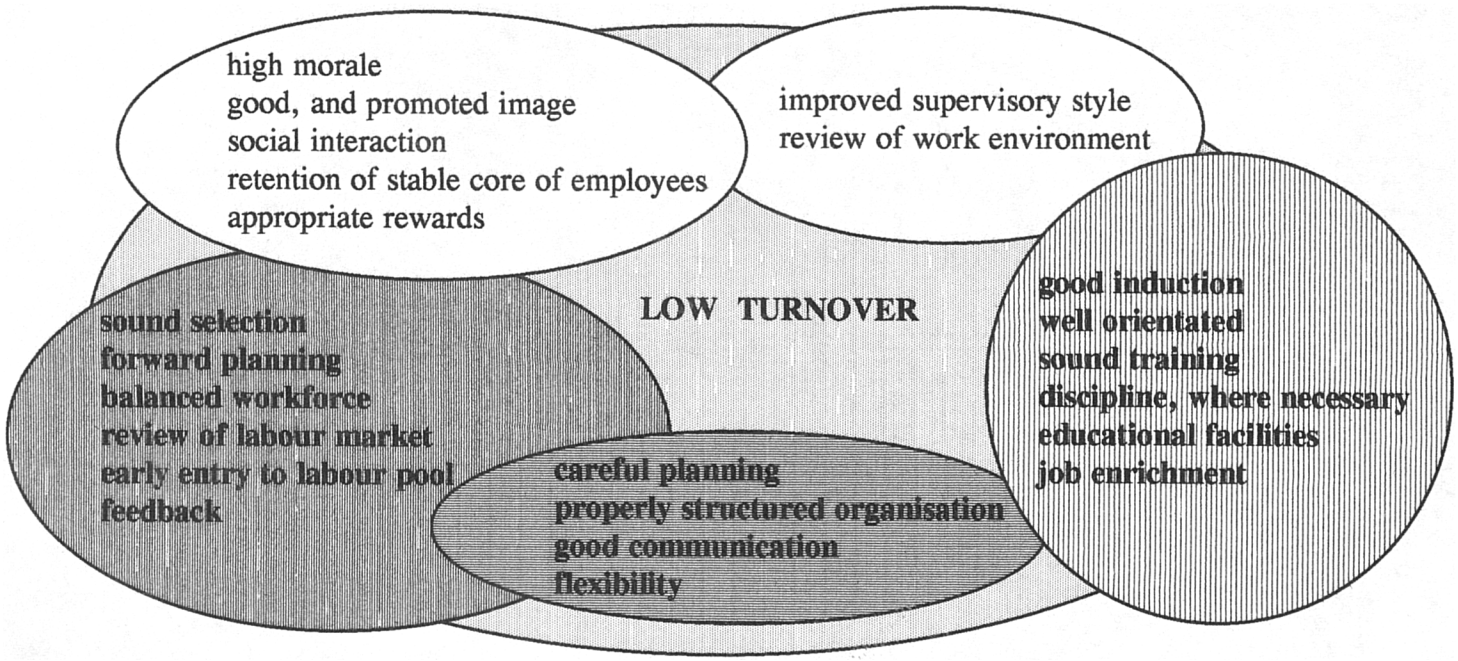

Figure 4.5 Low Turnover and Factors which Influence/Promote it

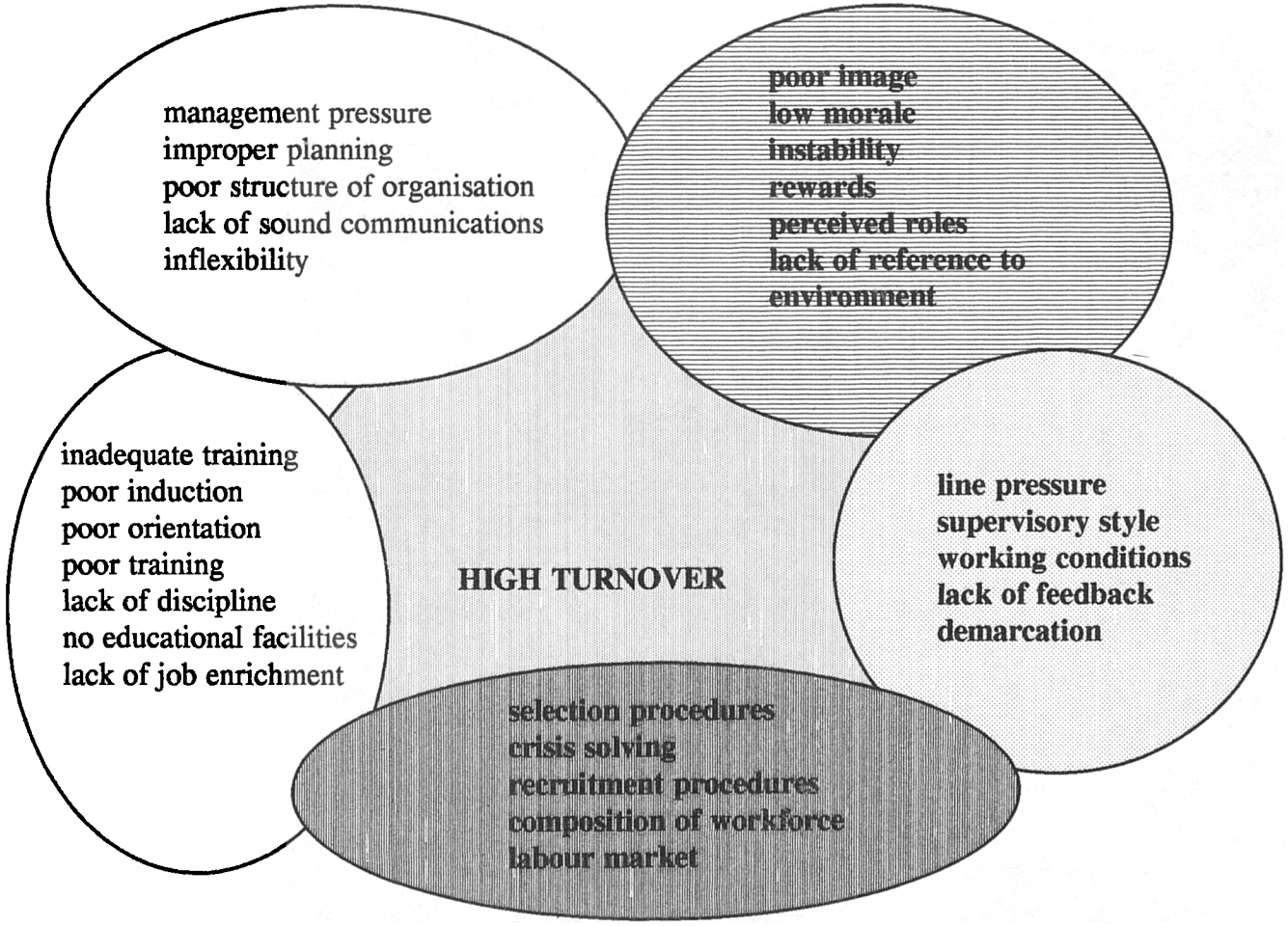

Figure 4.6 High Turnover and Factors which Influence/Promote it

Within this process are changes in labour mobility arising from:

a) occupational mobility
b) inter-organisational mobility
c) intra-organisational mobility (both locale and function)
d) entrance and exit from the labour pool
e) inter-industry mobility
f) geographical relocation

These changes are supported by Shorey (17), and Greenhalgh (18), who go on to amplify the employee's search for firms paying wages higher than those currently received along with those that have a suitable opening, and the effects of this 'search' upon labour supply.

Each of the factors listed above may occur simultaneously and in conjunction, therefore the situation of an individual changing geographical location whilst also changing occupation is not an uncommon occurrence. Entrance to and exit from the labour pool, is the exclusive factor in labour mobility and is pronounced in certain demographic groups. Indeed as the labour pool of 16-25 year olds decreases along with the lowering of retirement age, so the exclusivity of entrance and exit will have a greater impact upon labour mobility. Curran (19), notes that "quits vary inversely with the level of unemployment in the economy as a whole", therefore with a shortfall in prospective employees, and the continued high work load levels, then the employer may well be faced with increased labour mobilisation.

Further consideration will be given to labour mobility and sources of supply of labour in a following chapter.

Thus labour turnover has been distinguished for the purposes of this study, however, within turnover there are two basic types: voluntary and involuntary (20) (21). Distinction between the two will serve to clarify matters further.

4.2.1 Voluntary or Involuntary

Within any organisation both voluntary and involuntary turnover may be exhibited. The former occurs when the employee leaves the organisation by his/her own volition. Involuntary turnover is generally initiated by the organisation within which the individual occupies a post, it includes: death, ill-health and redundancy. Any organisation in attempting to limit turnover, will consider carefully those areas of turnover that may be regulated and emphasise these areas when formulating and implementing policies. Figure 4.7 illustrates the nature of voluntary and involuntary turnover when considered with those areas that may or may not be regulated.

Whilst employees are primarily concerned with involuntary turnover i.e. how safe is their job, the organisation is rightly concerned with those who desert, which may be, and often is, the major element of voluntary turnover. March and Simon (22), promulgated a comprehensive view of labour turnover, noting that the perceived desirability of leaving and the perceived ease of movement had great influence upon voluntary turnover. That is to say that when activity in the market place is high and labour supply is tight, then, any movement will be voluntary, conversely, when high unemployment prevails then involuntary mobility assumes predominance.

4.3 MEASUREMENT OF LABOUR TURNOVER

Measures of Labour Turnover abound, and whilst it is not the intention to delve deeply into this matter, a brief summary of several commonly utilised techniques that may be applied to this research, are given below.

Consideration will be given to the following:

a) Crude Rate Analysis (both accession and departure)

b) Labour Stability Index

c) Survival Patterns

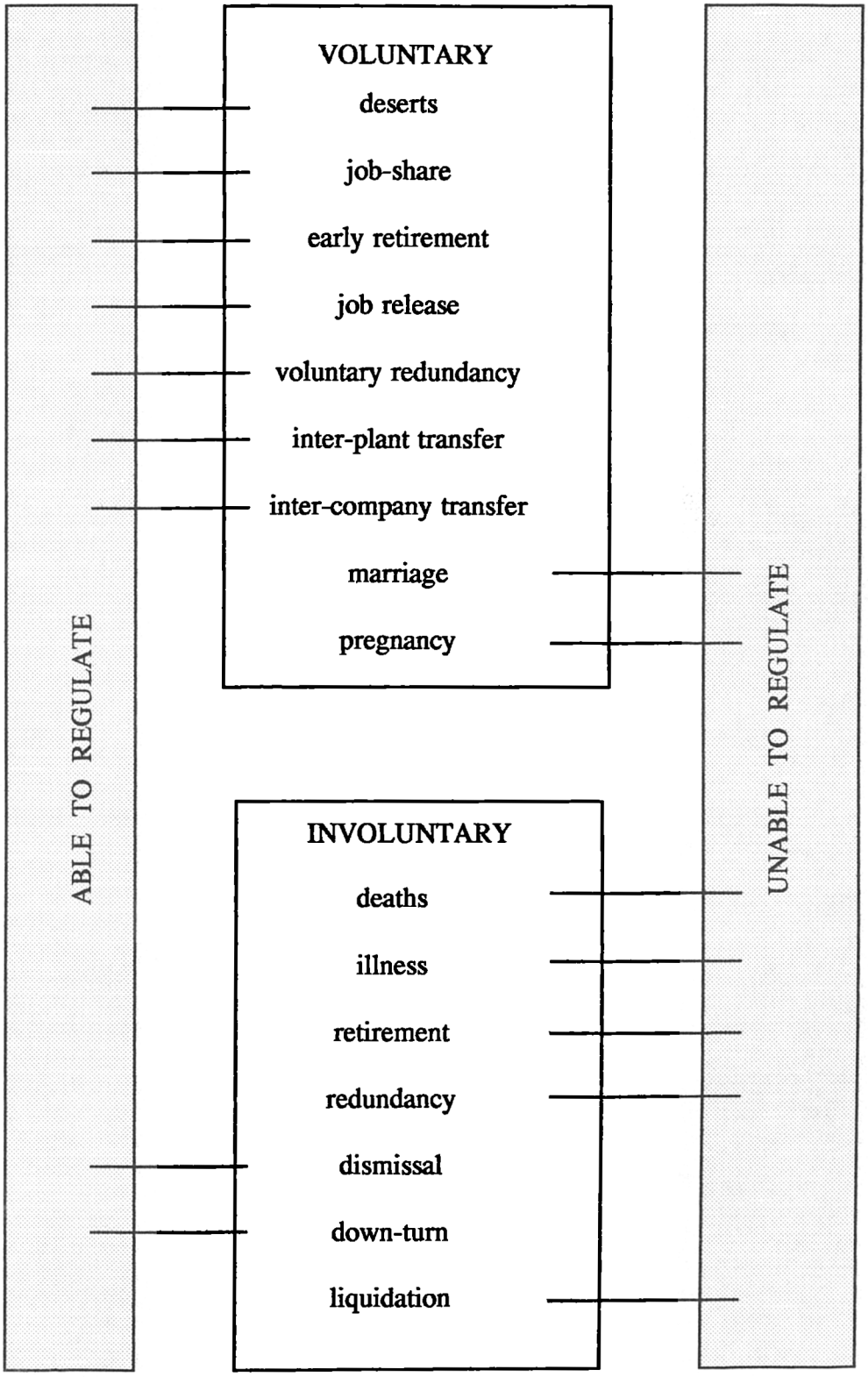

Figure 4.7 Management of Voluntary and Involuntary Turnover

Attention is given to these measures since in arriving at strategic decisions management must take cognisance of the labour turnover rate and strive to measure its rate of change (23) (24).

A) Crude Rate Analysis

Whilst being less refined than other actuarial methods, the crude rate nonetheless provides a measure of the general level of labour turnover within the organisation. The crude rate may be calculated as follows (25) (26) (27):

$$\text{Accession Rate} = A_r = (N_e/T)x\ 100 \qquad (1)$$

$$\text{Departure Rate} = D_r = (N_l/T)x\ 100 \qquad (2)$$

where N_e = number of new employees engaged

N_l = number of employees who left

T = the average number of employees

all considered during the same time period e.g. one year.

These crude rates may be applied to the organisation as a whole or to specific departments/occupations. Since they are crude rates, they inevitably have inbuilt misgivings. Cuming (28), emphasises the unavoidable nature of some separations i.e. those of pregnancy and career advancement, and in doing so, adjusts the basic Departure formulae (Formula 2) to take account of these. Hence

$$D_r = (N_l/T)x\ 100 \qquad (2)$$

is amended to become

$$D_r = (N_l - U/T)x\ 100 \qquad (3)$$

where U = unavoidable separations.

Furthermore, the crude rates calculated may be influenced by the condition of the organisation i.e. expansion or contraction. Van der Merwe and Miller (29), noted that a departure rate of 100% per annum could in fact harbour many varying scenarios e.g.:

a) the entire workforce had been turned over in the space of one year; or alternatively,

b) a third of the workforce had been turned over three times, etc.

Other areas of importance which fail to be highlighted by the crude turnover rate are:

length of service
stable workforce cores
short-term employees

These areas are of importance to management in long term forecasting and resource utilisation, as an alternative to Crude Rate Analysis, the Labour Stability Index may be employed.

B) Labour Stability Index

This index expresses the number of employees with more than one years service, as a percentage of those employed one year ago and provides a measure of the tendency of longer service employees to remain with the organisation. The Labour Stability Index may be calculated thus:

$$\text{Labour Stability Index} = L_{si}$$

$$L_{si} = (N_{mtl}/T)x\ 100 \qquad (1)$$

where N_{mtl} = number of employees with service exceeding one year; and,
T = the total number of employees at the beginning of the period.

An example will serve to illustrate the use of this index and its ability to clearly highlight problem departments or occupations.

Example 4.1

Department X	Department Y
100 employees of which	100 employees of which
90 leave and are replaced	10 leave and are replaced 9 times.

i) **Crude Turnover Rate**

Dept X = (90/100)x 100 = 90% Dept Y = (90/100)x 100 = 90%

ii) **Stability Index**

Dept X = (10/100)x 100 = 10% Dept Y = (90/100)x 100 = 90%

Clearly then, although both departments have exhibited the same crude turnover rate, the labour stability index for Department X is significantly lower than that for Department Y and must give cause for concern. The motivational aspects considered within Chapter 3 are emphasised by the labour stability index and this index serves to reinforce many of the basic tenets considered within the foregoing chapter. Writers such as Livy (30) and Bowey (31), suggest a strong correlation between "reinforcing the right reasons for staying" (32), and the labour stability index.

C) Survival Patterns (Cohort Analysis)

Whilst the two indices discussed above are useful guides, for human resource planning, on the state of well-being of an organisation, a more pedantic method capable of use in forecasting is required. A functional weakness of the Labour Turnover Index is its failure to allow for the length of service variable within determinations. Analysis of homogenous groups (Cohorts (33)), i.e. employees grouped according to dates of engagement, leads to detailed rates of survival for each cohort of employees through time. Care should be exercised to ensure that the cohort consists of members with similar characteristics, occupations and dates of recruitment (34). The loss rate for each cohort is recorded until the rate has stabilised to a small and slowly diminishing value (35). Once this "stability" has been attained a survival curve for the cohort may be plotted. This survival curve may then be utilised to predict the turnover which may be expected from cohorts over a given time period.

The forecast assumes that time may be applied liberally to both past and future trends. In reality of course, the economic, as well as social conditions may vary so wildly as to vitiate the forecast.

Calculation of the Survival Rate and its associated Wastage Rate may be derived as follows:

$$\text{Survival Rate} = S_r = (L/T_n) \times 100$$

where L = the number of new employees who remain during the period
T_n = the total number of new employees recruited

$$\text{Wastage Rate} = W_r = (T_n - L/T_n) \times 100$$

Plotting results for particular cohorts onto log-graph paper leads to straight line derivations, which assist in the forecasting process (Figure 4.8 illustrates this process).

This line may be extended into the future and facilitate prediction of expected losses. Therefore management have information on which to base future requirements and strategies. Bryant (36), when considering cohort analysis, noted an important concept, that of "half-life" (37), i.e. the time taken for half the original group to waste. Benefits deriving from the half-life are:

a) it offers a measure of stability both intra-organisationally and intra-occupationally, since it is independent of length of service; and,
b) it may be utilised in predictive processes involved in recruitment and manpower planning, e.g. 4 labourers are needed in 1 years time and the half-life of labourers is 6 months.

Recruitment needed now = 16

first half-life loss	= 8	therefore core	= 8
second half-life loss	= 4	therefore core	= 4
Finish number		= 4, the desired number.	

The half-life of cohorts and occupations will vary, therefore careful research and analysis of the data is required prior to the actualisation of the technique.

Cohort analysis then, offers the advantages that we may assess the resulting effects of various recruitment methods and policies along with the ability to forecast future turnover and human resource requirements.

4.4 CAUSAL FACTORS IN LABOUR TURNOVER

Underlying reasons for labour turnover are multi-variate, (as discussed earlier), the actual turnover may be by the employee's own volition or derived from the organisation. Within each of these sources many individual factors may be isolated. These factors will seldom, if ever, work in isolation. Rather, they will tend to act and work in conjunction with other factors, to create a complex foundation structure which leads to the turnover. Herzberg (as discussed in Chapter 3), showed in his research on motivation that factors tended to intermingle and offer a convoluted problem for the researcher to solve.

Much has been written on the subject of prime movers in labour turnover (38,39,40,41,42), and therefore a brief consideration of relevant aspects will be given within the following sub-chapter.

4.4.1 Isolated Factors

A complex combination of individual characteristics, organisational practices and labour market conditions, leads to the phenomenon of labour turnover. Within this "soup" of ingredients, a range of likely factors would include:

Individual: age, sex, marital status, skill level, educational standard, race, length of service, personality, aptitude, ability, ambitions, social interests, family ties, etc.

Organisation: size, structure, composition of labour force, terms and conditions of employment, employment practices, job satisfaction, unionisation, etc.

Labour Market: growth, decline, local conditions, national conditions, competition, economic trends, etc.

Beaumont's study (43), reinforces the consideration given to many of these ingredients within the "soup" and in particular illustrates how several aspects are of paramount importance e.g.

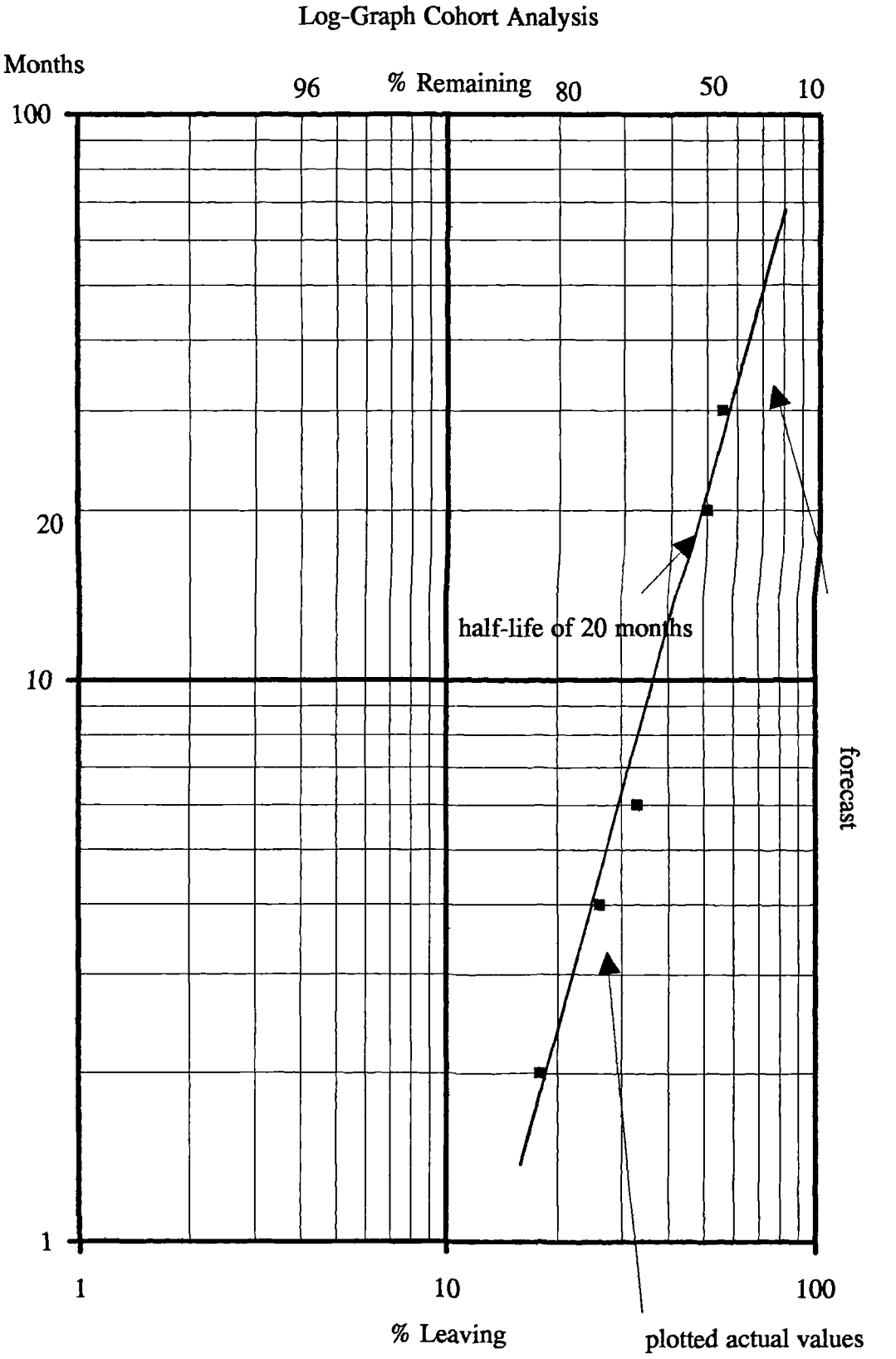
Log-Graph Cohort Analysis
Months
96
% Remaining
80
50
10
100
20
10
1
half-life of 20 months
forecast
1
10
100
% Leaving
plotted actual values
all values are hypothet

Figure 4.8

U.K. Region most preferred to work in

Location	Position in Table	
Wales/south west	1	
South east (excluding London)	2	
London	3	
North west	4	total %
Yorkshire/Humberside	5	willing to
Scotland	6	move home
North east/North	7	to next job = 56%
West Midlands	8	
East Midlands	9	
Northern Ireland	10	

Also emphasised are the factors associated with terms and conditions of employment e.g. working hours, holiday entitlement, pensions and health schemes, amongst others.

When considering the top five reasons for alternating employment, the study found that:

a) the desire for more experience was pre-eminent,

b) the lack of promotion opportunities was second in the respondent's table,

c) the desire to simply "have a change" occupied the third position,

d) the offer of a "good job" came fourth in the ranking of main reasons; and surprisingly,

e) the desire to obtain more money was bottom of this table of main reasons.

It was a main reason, but the least important of the five listed reasons.

These findings support many of the tenets suggested by writers on motivation, and further illustrate the complexity of the process of labour turnover. Therefore it becomes clear that the picture of labour turnover causal factors as a whole, is akin to peering into a pool of muddy water.

Of particular interest to this research is the organisation's employment practices. Within these employment practices are:

- recruitment procedures
- training
- discipline
- working conditions
- supervisory style

The area of recruitment procedures provides the focal point for further discussion.

4.4.2 Recruitment Procedures

Many writers consider improper recruitment procedures as a significant factor in the process of labour turnover (44) (45) (46) (47) (48). Laser specifically considers "improper personnel selection techniques", as a primary cause of employee turnover.

Selecting the employee who will not integrate into the organisation either because they lack some essential skill, or fail to share common interests with other employees, may well lead to termination of the employment.

In the selection process management are faced with several problems:

Firstly: the available pool, (as discussed in Chapter 2), may well limit the actual number of applicants coming forward for consideration; and,

Secondly: the lack of a consistent approach to the selection process may lead to judgements based on: physical appearance, first impressions, mutual interest of interviewer and interviewee, etc.; and,

Thirdly: failure to fully communicate the tasks and functions of the vacancy whilst over emphasising the virtues of the organisation as a whole, leading to confusion and "blinding" of the applicant, since not only is the applicant being chosen, but they too are choosing i.e. the organisation.

Therefore in establishing a systematic approach to recruitment procedures i.e. in utilising a particular recruitment source, it is envisaged that this research will consider the use of recruitment sources as an indicator of:

a) stable employee recruitment; and

b) a correctly applied technique; and

c) a reducer of labour turnover.

Labour turnover within the construction industry has generally been taken to be an acceptable everyday occurrence. Management faced with the task of adequately resourcing the obligation must seek measures which will ensure some form of predictability in their labour resource i.e. how stable is the resource.

The issues and areas which may influence the existence of labour turnover and its physical rate, may be considered in isolation, or more appropriately, considered under an holistic approach. The previous material on motivation theories (Chapter 3) has shown that each individual may require specific attention, likewise any group within the organisation which the individual may be a constituent member of.

It has been shown that the labour turnover, if managed properly and strategically, may well be a useful weapon to be fully utilised by management, under the correct set of circumstances.

Labour turnover has a profound effect on the organisation, the various measures of labour turnover discussed, each exhibit advantages and disadvantages. It is suggested that whilst no measure has the right to be used in isolation, they do contribute to the overall picture of labour turnover within the organisation. Use will be made of these measures within the analysis of the research field data in order to highlight differences between the recruitment sources used.

The recruitment source perceived as having the greatest utility may well be one which is fully accommodated at present or one which should be taken on board as the 'in-house' preferred recruitment source. Use of this preferential source may well go some way towards introducing a degree of stabilisation in the recruitment practices of the organisation.

An aspect of labour turnover which has been touched on briefly, is that of ramifications deriving from the turnover. No doubt, any labour turnover will have both direct and indirect influences upon the organisation and these influences will be discussed further in the following chapter.

Chapter 5.0

RAMIFICATIONS OF TURNOVER

5.1 THE RAMIFICATIONS OF LABOUR TURNOVER

One of the objectives set at the beginning of this work was that of producing a summation of the effects of labour turnover. In doing so consideration is given to several viewpoints i.e. those of the industry as a whole, those of the singular organisation, and also those of the employee. Producing the summation provides a valuable overview of the effects of labour turnover and also acts as a link between the earlier chapters.

The ramifications of labour turnover do not go unnoticed. Works within the fields of construction management (1), construction economics (2,3), corporate strategy (4,5), labour economics (6,7), and industrial psychology (8,9), all highlight succinct areas which may be considered when endeavouring to establish the potential of any outcome deriving from labour turnover. Globerson and Malki (10), along with Rees (11), consider the "negative" consequences, whilst Dalton (12), and Kesner (13), focus on the "positive" outcomes of labour turnover.

Review of a general range of such works points to:

a) functional/dysfunctional consequences: and,
b) monetary/non-monetary consequences; and,
c) salary/non-salary consequences,

as being the group headings under which the majority of outcomes may be classified.

Turnover, despite its counteractive connotations, may in fact offer positive benefits to the organisation. The question as to balance poses the major challenge to management i.e. at what stage is there too much labour turnover and when is there not enough (14). The consequences tend to provide the key to this balance equation.

Examples of the negative consequences the organisation must grapple with include: financial loss and loss of goodwill. Positive consequences may include: increased skill levels and a better mix in the labour force.

Further consideration of the consequences emanating from labour turnover demands that the argument be viewed from several perspectives, namely; those of the employee, those of the employer, those of the wider environment, and those of the industry itself.

5.2 THE EMPLOYEE'S PERSPECTIVE

To the employee, the act of leaving the organisation may have both beneficial and counteractive repercussions. The index of consequences shown in Figure 5.1, illustrates the positive and negative effects likely to be encountered.

If the exit is voluntary, then the employee expects that the change in his place of employment will lead to "net advantages" (15,16,17). It is to be anticipated that: salary will increase, increased self-actualisation will occur, greater challenge will be offered, along with the various other positive aspects shown in Figure 5.1. The decision to leave then, involves comparing the outcomes of leaving with those of remaining. Detailed examination may be given to the monetary and non-monetary outcomes and in particular, emphasis placed upon the wage/non-wage areas.

For the employee who leaves the organisation involuntarily, then no such comparison is available. Choices available to them follow a fairly well defined format i.e. unemployment benefit, social security payments, etc.

In light of this, the remainder of this sub-chapter will consider the monetary and non-monetary aspects associated with those voluntarily departing.

5.2.1 Monetary and Non-monetary Aspects

An individual leaving his present employer may bisect monetary costs into those associated with salary and those non-salary related.

Considered within salary costs would be items such as:

i) increase or reduction in the level of remuneration received.

ii) loss of bonus or special payments, or vice-versa.

iii) loss of shares or share options, or vice-versa.

iv) enhanced P.A.Y.E. contributions, along with other statutory payments.

v) possibilities of further salary enhancement.

vi) subsidy, or loss of subsidy, on transportation.

vii) entry or exit from expense account schemes.

The non-salary related items would include consideration of:

i) health plan exit or entry.

ii) increase or reduction in travelling time.

iii) job-search costs i.e. time, mail, telephone.

iv) loss or gain of pension benefits and rights.

v) enhancement or reduction in leisure time.

Therefore in choosing to leave the organisation, the net benefits deriving from the job substitution must be perceived by the employee as being substantially greater than costs.

The non-monetary costs for the person departing may be seen as being either psychological/personal or social. The psychological costs include consideration of contributory elements such as:

challenge, self-actualisation, stress, perceived promotion or possibilities for promotion, enhanced self image, career enhancement.

Beaumont (18), shows in her study that challenge; respect from work group peers; individual freedom; fresh knowledge, appreciation; being able to assist others; suitable training; being liked, and peer group respect, are highly important factors in providing a substantial degree of job satisfaction.

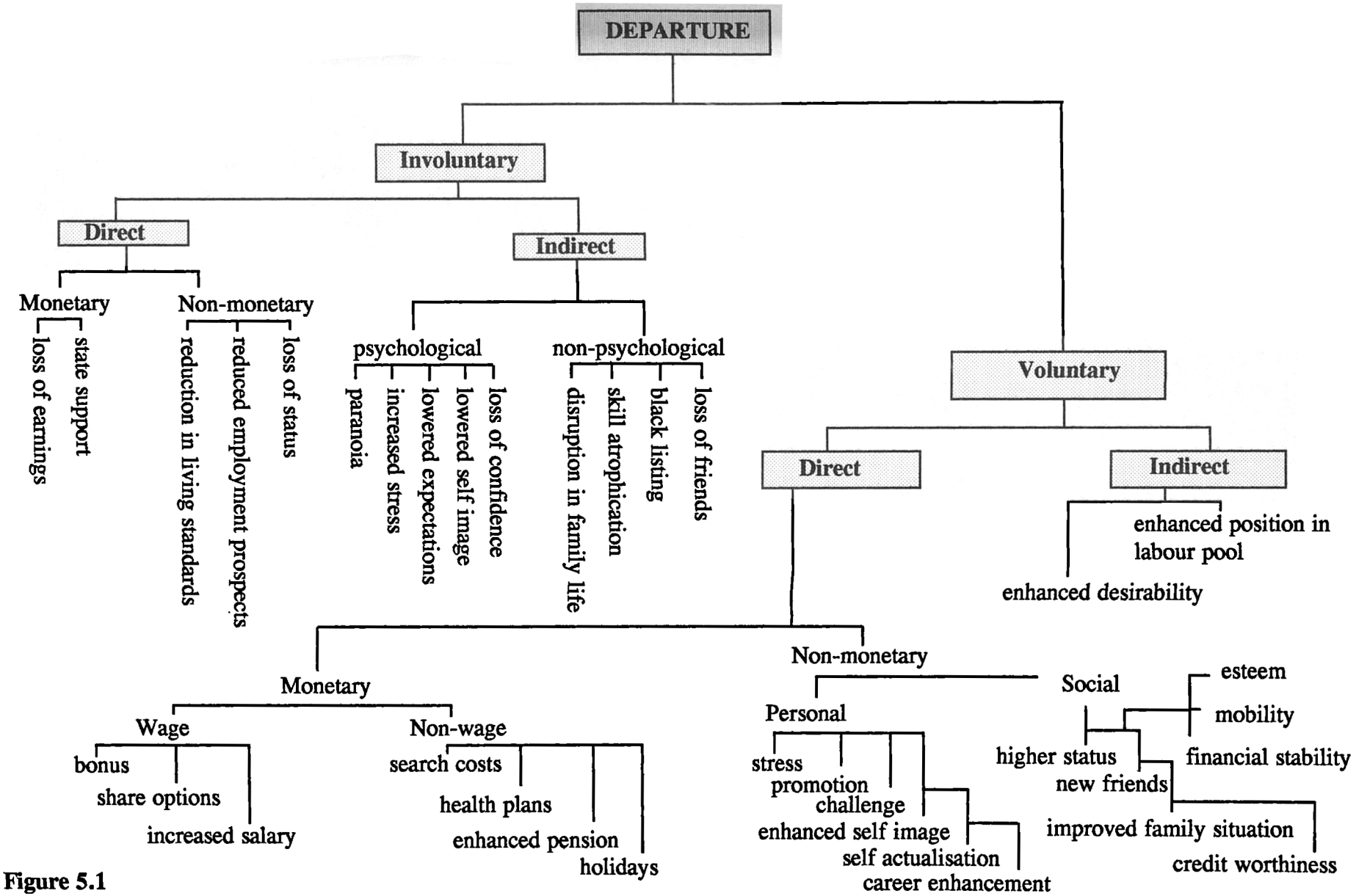

Figure 5.1

Consequences of Employee Departing

One other aspect worthy of note at this juncture is that of the social stigma attaching to those unemployed, whereby Blackburn (19), noted that employers showed prejudice against unemployed persons, considering them to be unstable. Thus reinforcing the enhanced self image aspect, considered above, and suggesting that the ability to move to a new job improves the self image.

Social costs borne in mind may include:

i) improved family conditions.

ii) mobility, both geographically and socially.

iii) enhanced status in the community.

iv) winning and losing friends.

v) financial stability or uncertainty.

vi) enhanced or reduced credit worthiness ratings.

5.2.2 The Employee's Determination

Where the positive monetary and non-monetary benefits of leaving prove advantageous to the individual and family, then the move will be well founded and provided circumstances remain unchanged, should lead to a reasonable period of employment stability. The elements considered within this form of 'cost benefit analysis' all combine to produce an algorithm which varies from individual to individual.

5.3 THE EMPLOYER'S PERSPECTIVE

Traditionally, the turnover of labour has been perceived as being a generally negative event for the organisation (20,21,22). Many current writers suggest that in fact the situation may harbour both advantages and disadvantages for the organisation (23,24). Bluedorn discusses how labour turnover may be economically justifiable, Figure 5.2, and expands on various reasons for actually desiring labour turnover e.g.:

a) a presentation of a youthful image.

b) facilitation of change.

c) introduction of innovation.

Further enhancement of the desirability of turnover is provided by Martin and Bartol (25), who illustrate in their Performance-Replaceability Strategy Matrix (Figure 5.3), the effects and opportunities available from labour turnover. The permutation of possibilities contained within this matrix are readily applied to the construction industry e.g.

The following examples illuminate their categories:

Category F.

A labourer on a site who is repeatedly late, performs poorly and generally harbours a negative attitude towards execution of the work in hand.

Category E.

A junior Estimator who is pricing one specific project and has continually incurred errors and inaccuracies. Whilst he knows the project well, to allow continued employment may lead to serious financial implications.

Category D.

The Cost-Bonus Clerk who performs on average and executes relatively routine tasks. Someone with knowledge of computer based systems e.g. spreadsheets or databases, may increase productivity i.e. operating over several sites, and lead to significant cost reduction.

Category C.

The Buyer who has established a high rapport with suppliers and detailed knowledge of where the most advantageous terms and conditions may be obtained.

Category B.

A Project Manager or Contracts Manager who achieves time and financial targets whilst maintaining quality standards.

Category A.

Contracts Director or other director, whose detailed knowledge, expertise and technical skills are paramount.

Categorisation of individuals contained within the organisation into each of the above group headings would facilitate instant appraisal of the action necessary upon notification of intention to leave, or dismissal.

5.3.1. Non-Positive Consequences

As discussed earlier, labour turnover may have both beneficial and non-beneficial ramifications for the organisation. Figure 5.4 illustrates the likely effects deriving from this labour turnover and there follows a discussion of some of the key non-positive areas outlined.

5.3.1.1 Monetary: Wage Costs and Non-wage Costs

Monetary wage cost has two constituent parts; direct and indirect productivity costs. The direct costs would relate to the salary given whilst the new entrant is striving to match, or exceed, the productivity levels of the employee being replaced. This induction period, whilst offering low marginal productivity, nonetheless is important in the overall process of labour turnover. Buonocore (26), emphasises the transitory nature of employees at this juncture in their organisational life and proposes that "Mentoring" may well eliminate many fears, anxieties or misconceptions that the new employee may harbour.

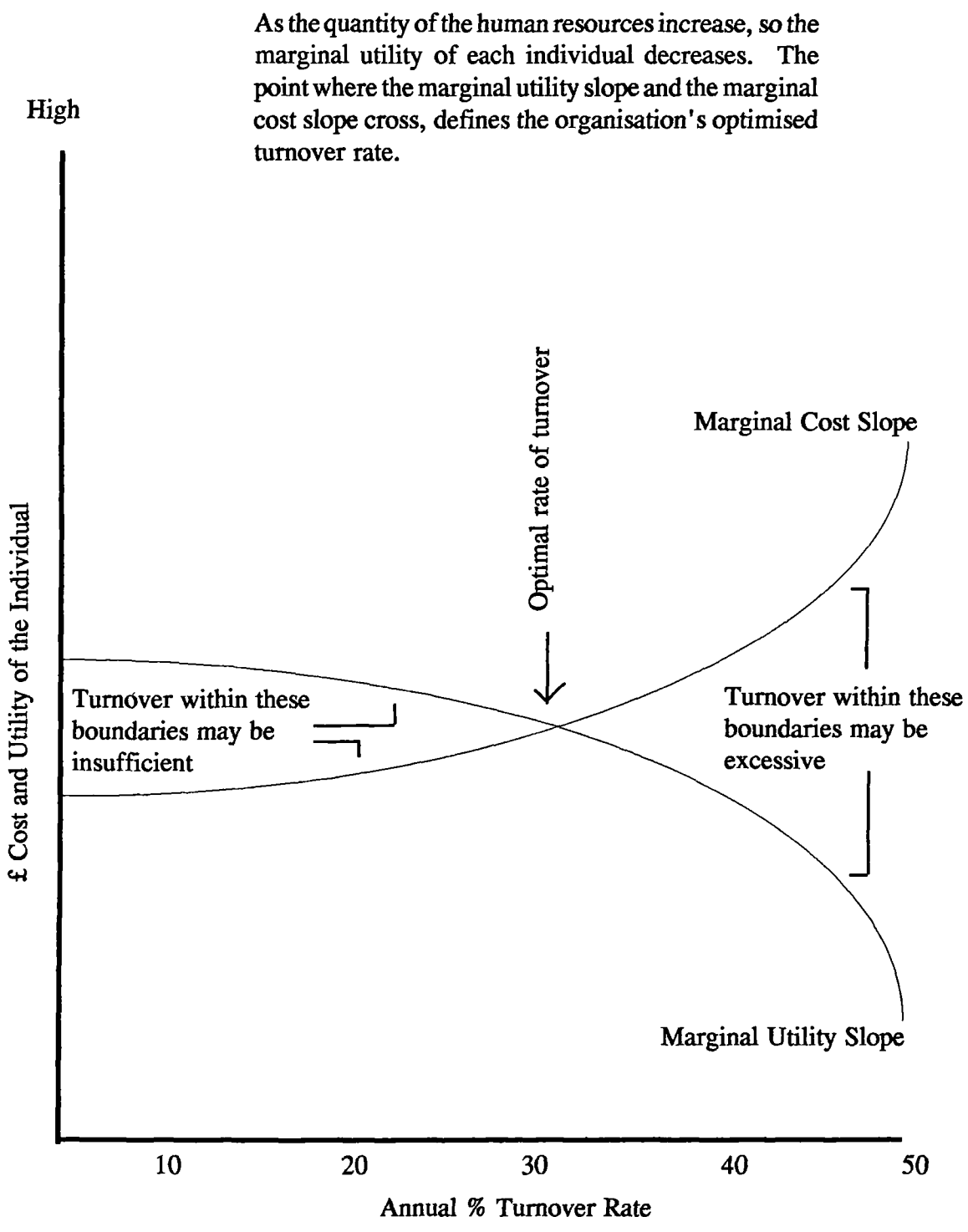

Figure 5.2 Turnover Management Economics Source: Bluedorn, 1982, p8

Source: Martin and Bartol, 1985, p66

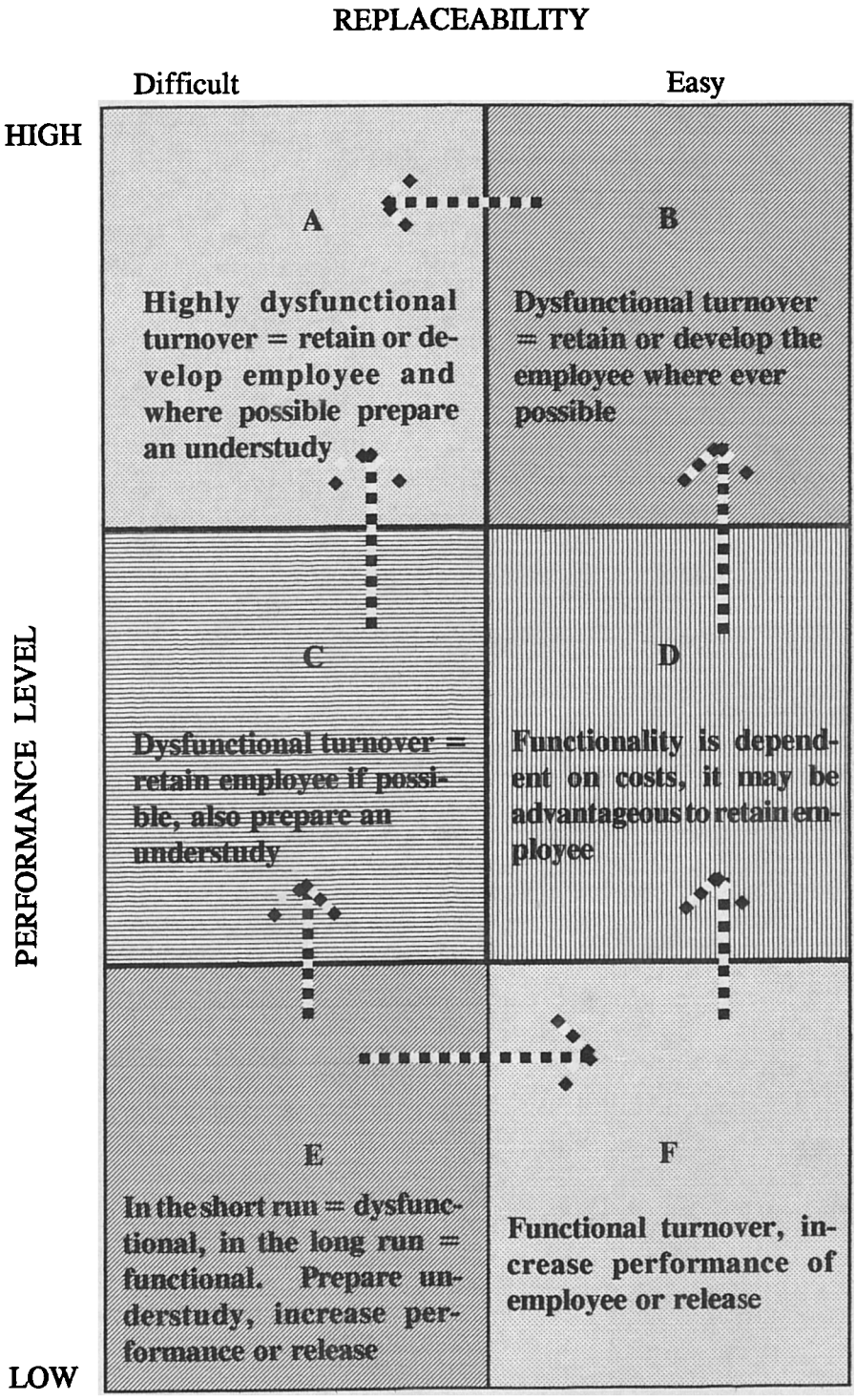

Figure 5.3 Performance - Replacement Strategy Matrix

The responsibilities of the Mentor may be considered during three distinct phases, namely:

pre-entry, induction+x, and post induction.

Pre-Entry.

Prior to entering the organisation the Mentors may introduce themselves, whilst explaining the basic premise of the mentoring function. A discussion and answer session on the organisation and the new employee's roles and responsibilities, will serve to provide beneficial prior knowledge. Goldstein (27), and Krockhardt et al (28), support this general pre-induction information session noting that organisations should "provide the prospect with a window which shows the firm in as true and as clear a light as possible".

Induction + x (a time period of say, two weeks)

As the new employee enters the organisation the Mentor will be on hand to familiarise the new employee with utilities e.g. cafeteria, store rooms, and also operational procedures.

Post Induction

The Mentor will now begin to be seen more as the adviser e.g. introducing 'experts' or deciphering organisation 'jargon', whilst still introducing new concepts i.e. social groupings such as golfers. The Mentor will be available for moral support and guidance but will at this stage have the opportunity of severing the mentoring umbilical chord arrangement, when the employee is perceived as stable, capable and functionally secure. Wanous (29), Reilly (30), Ilgen (31), and others have given considerable attention to the issue of induction i.e. the complete process of entry into the organisation. Information given prior to entry is believed to function as a realistic precursor to the actual job itself and may reduce turnover in one or more of the following manners:

a) by offering the potential employee the opportunity to 'self de-select' from the available position; or,

b) by reducing expected job conditions, thus when in place, the actual conditions are seen as favourable and lead to higher levels of satisfaction. Porter and Steers (32), show how "met-expectations" may lead to significant increases in satisfaction and hence stability; or,

c) increasing commitment to the organisation since the decision to participate was voluntarily made; or,

d) by enhancing the capability to comprehend and deal with less desirable job changes.

Indirect Costs

Indirect costs would include disrupted productivity, labour shortage and decreased productivity. Becker (33), discusses how productivity disruptions are greatly influenced by the skill-level or quality of the employee exiting. If the skills are general in nature then these employees are significantly less disruptive and may be more readily replaced from the labour pool. Martin and Bartols' Performance-Replaceability Strategy Matrix (as discussed under Figure 5.3), reinforces the perception of likely disruption from any employees' departure.

Monetary Non-Wage Costs.

Many formative analyses of monetary non-wage costs have enabled detailed statements of constituent elements to be tabulated (34,35,36).

The monetary non-wage costs may be segregated into direct and indirect costs. The direct costs including items such as areas concerning recruitment and selection, and those arising during the employment but which are not related to hours of work e.g. C.I.T.B. Levy. The indirect costs including amongst other aspects, the need to consider redirecting strategies and the implications deriving therefrom.

Direct Costs.

Recruitment and Selection:

Costs to be considered within this heading would include:

advertising, employment agency fees, application processing, screening, applicant expenses for travel etc., interviews, medical examinations, along with overhead costs associated with maintaining an employee on the organisations' payroll e.g. Accounting and Personnel Departments.

Training Costs:

Considered within this sub-heading are costs arising from:

trainers' time, materials utilised, employees' time, reduced productivity, orientation of the employee, off-site training or education, and increased wastage and error from the new employee.

Non-hour Specific.

Oi (37), discusses social security payments, pension plans, life insurance cover and items such as levies as being non-wage costs which are borne by the employer regardless of the number of hours expended by the employee.

Indirect Costs

Whilst being more subtle, or on occasions violent in its nature, the strategic planning of the organisation is a vital issue. Where the organisation is going and how it intends to achieve these goals and aims, will be greatly influenced by labour turnover. Proctor (38), notes that in corporate or strategic planning the organisation must take full cognisance of strengths and weaknesses. Labour turnover, if at unacceptable levels, is seen as a corporate weakness.

5.3.1.2 Non-Monetary

Having given consideration to monetary costs of labour turnover, attention must now be focused on non-monetary aspects. Generally, these may be thought of as referring to those costs not directly attributable to production labour e.g. motivational influences, morale, organisational structure, image, etc. The subject may be bifurcated into those areas relating wholly to the organisation and those of a more pervasive, subtle, nature which influence the external environment.

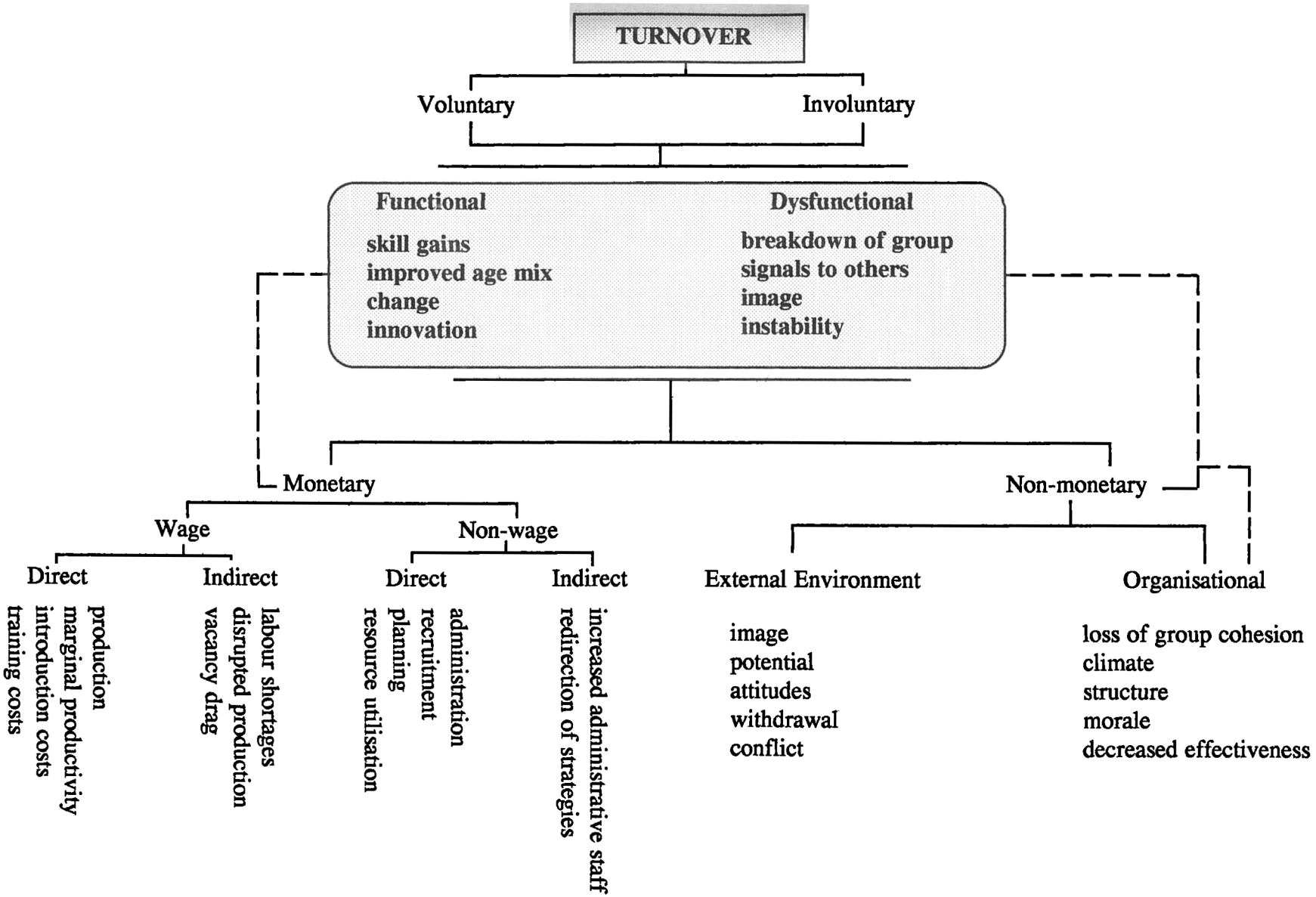

Figure 5.4 Taxonomy of Turnover Consequences

Organisational Issues:

Staw (39), recognised the influence which leavers possess. The departure signals to the remaining cohort that alternative employment is available, thus lowering the morale of those abiding and at the same time encouraging these stable employees to consider job-search. Spencer, Steers and Mowday (40), discuss the linkage between the probability of finding acceptable alternative employment and the turnover process. The employee leaving clearly signals that such a probability is high and therefore departure must be considered as an acceptable risk. The cohesiveness of the workforce is reduced and the likelihood of further departures must be enhanced significantly.

A departure at sufficiently senior level may well lead to reorganisation of workloads or even departments. Thus the structure of the organisation may radically alter as an after effect of the employees' departure.

Formal and informal communications and networks may be influenced, with resultant interference of planned programmes, strategies or policies.

Environmental Issues:

Organisations show a public image, just like any individual. This image will influence customers and potential recruits since very often the image is the first contact made between the organisation and the individual. The perception of this image is important and any loss or unsavoury attention will lead to increased difficulties in: recruitment of new staff, retention of existing, and curtailment in sales. The recent C.I.T.B. (41), survey of the image perceived of the construction industry by school age students, amplifies just how powerful the image factor is.

Within the C.I.T.B. study, only 9% of the respondents saw the construction industry as an industry worthy of respect, whilst 56% of the respondents perceived office/clerical work as worthy of respect. This significant difference i.e. 47% clearly

demonstrates that the construction industry as a whole must invest substantially greater effort, manpower and resources into improving and modifying the perceived image of the industry.

So far, the issues under consideration have tended to be negative in nature. As stated earlier, the labour turnover may in fact give rise to organisational benefits. These positive consequences will be considered further.

Positive Consequences:

Johnson (42), illustrates that "recruitment drag" may lead to savings in manpower budgets without loss of posts. The recruitment drag involves deliberately holding a post vacant for a specified period of time thus distributing the work tasks over the remaining workforce and effecting savings of labour costs.

New recruits may bring a fresh approach and increased assertiveness into the existing workforce, whilst leading in re-evaluation and re-assessment of all that has gone before. Group norms and procedures will come under close scrutiny, as will communication procedures and personal linkages.

The employee who departs may well have been under-productive, troublesome and a poor attender. The disruptive alternatives to quitting i.e. absenteeism and sabotage, may well have already been exhausted by the employee. Absenteeism as a precursor to labour turnover is well documented (43,44,45,46), and its effects on the organisation are painfully obvious e.g. loss of productivity, dissension at workload sharing by other workers, challenge to management's authority. Employees who exhibit such behaviour are desirable as candidates for departure.

Other benefits that may befall the organisation are:

i) introduction of new knowledge or skills.

ii) updating of technological advances, via the recruit.

iii) increased stimulation of changes in policies and practices.

iv) increased internal mobility opportunities.

v) an increase in the flexibility of the structure.

vi) decrease in other withdrawal behaviours.

vii) increased opportunities for cost reduction i.e. lower salaries.

viii) consolidation of cost reduction techniques.

ix) increased satisfaction in the remaining cohort.

x) reduction in holiday entitlement.

All of these factors may have no hard, discernible, cash value, but nonetheless have subtle, subjective benefits for the organisation. Factors worthy of further discussion are those of reduction in holiday entitlement and lower salaries.

Holiday Entitlement:

The right to paid vacation time is usually pro-rata to the length of service i.e. the longer the service, so the greater the holiday entitlement. With most individuals wishing to take these holidays at the best climatic period i.e. summer, so then the productivity of the organisation may decrease. Summer is generally the construction industry's' busiest period. A new recruit to the organisation will generally tend to receive the lower levels of leave entitlement, until sufficient length of service has accrued, along with being last on the rota of date availability i.e. when they can actually go on leave, thus the employee is available at the peak period and the disruption to production may be minimised.

Lower Salaries:

Where conditions in the labour market are right i.e. excess supply and little demand, then the organisation may be able to drive down the salary levels being offered to new recruits and at the same time impose more onerous conditions of employment e.g. longer basic hours before overtime is paid, and thus make significant savings.

Flamholtz (47) offers detailed analysis on human resource replacement costs. His work clearly illustrates the costs incurred when replacing presently engaged human resources with substitutes. The model outlined in his work considers many of the costs considered previously within this chapter, but, excludes from the cumulative arithmetic any discount allowance emanating from the beneficial aspects of the turnover. Indeed, in his earlier works (48), a detailed model for establishing the individual's value to the organisation had been proposed. The inference drawn from this hypothesised model is that all values will have a resulting residual positive value. The important issue to be drawn from his work is that the individual's expected realisable value to the organisation is a product of two components, namely:

a) the individual's conditional value (i.e. potential): and,

b) the probability that the individual will remain within the organisational framework.

Many influences combine to produce the realisable value, some which may be directly under the control of the organisation, others which are at the behest of the individual. Management of the organisation must seek to manipulate the factors over which they have direct control, in order to produce the greatest possible positive effect.

5.4 THE WIDER ENVIRONMENT

The many interacting forces which coalesce to form the wider environment e.g. legislators, pressure groups, lobbyists, end-users, associated industries, financiers, sub-contractors, etc., all take on board the level of labour turnover which is prevalent within an organisation. The information may be fed in directly e.g. via employment statistics, employees discussing the matter, employees entering new organisations, the organisation's inability to fulfil orders due to lack of staff, recruitment advertisements, or indirectly through tribunals, litigation, output or productivity levels, backlogs, staff morale, day to day dealings i.e. new faces, different contacts, etc. The organisation's ability to entice new recruits to enter within its confines must

be modified by the wider environment's perception of the organisation itself. New recruits will have the opportunity to consider carefully the various domains seeking to acquire their utility.

5.5 THE INDUSTRY

The industry as a whole may wish to present the best possible appearance to its constituent members, end-users, and supporters. In order to do so it must ensure that all aspects of its operation are deemed to be acceptable. An industry with excessive levels of labour turnover may be subject to unwanted public, or other, scrutiny. If the industry must take an active role in the control or management of labour turnover then it may deflect its attention or resources away from other more important strategic issues. This does not preclude some labour turnover, indeed the possible positive benefits emanating from the turnover have already been discussed in some detail. Nonetheless it does involve the industry in monitoring its levels of turnover and considering comparisons which may be made with other industries, although the uniqueness element of the construction industry should be well considered prior to drawing any conclusions from the comparisons made.

Whilst many aspects which interact to produce the conditional value are within the control of the organisation and so may be manipulated to produce a positive effect or value, the probability that the individual will remain with the organisation is subject only to the individual's own input. No doubt many issues and factors will play on the individual's perception of the desirability, or otherwise, of remaining within the organisation, but as stated, these are prioritised only by the individual.

Therefore in order to enhance the expected realisable value the organisation must endeavour to ensure that the probability of the individual remaining within the organisation is as high as possible and positive, i.e. **by use of a recruitment source which is predictive of low turnover and also long term employment**; based on the organisation's definition of what constitutes long term.

The ramifications of labour turnover have profound effects upon the organisation as a whole, the individual and the external environment. The stereotyped image of replacing an individual leaving the organisation with a duplicate must change, to encompass the belief of engaging 'the whole being' rather than simply an individual who can slot into particular role areas and carry on the work without interruption of the flow. Since the individuals applying to fill the vacancy will bring with them baggage consisting of varying degrees of skills, attributes, abilities, knowledge and beliefs, so then management must accept that a straightforward swap-over is virtually impossible.

Whilst labour turnover initially appears negative in nature, there may be as many counteracting positive issues as there are negative. Lack of turnover would tend to suggest that the individuals within the organisation are "blissfully content" and perhaps lacking in some of the basic motivating forces considered within chapter 3.0. The 'Shangri-La' may become in itself, locked into rigid routines and operations and so miss out on vital opportunities available in the market place. Those organisations which are perceived as being complacent are very often seen as being easy prey by the more avaricious organisations.

As discussed earlier, the positive and negative aspects of turnover may well be of such complexity that management must consider the wider ramifications and issues before reaching any conclusion. One underlying premise to both the negative and positive outcomes is that there are potential employees in the market place. Where the recruits may come from, and the influence this source has on the length of service, will be considered in the following chapter.

Chapter 6.0

SYNTHESIS OF THE RESEARCH

6.1 HUMAN RESOURCES

Management must arrive at an appropriate decision as to the degree of reliance to be placed on recruitment of 'ready made' employees from the labour market pool and/or the quantity of recruits to be drawn from internal sources (1,2). Johnson & Scholes (3) observe that in the final analysis "the success of a strategy is heavily dependent on the people required to put it into effect". This issue is supported by Badger (4) who notes that in the ultimate resort, the proper and efficient use of manpower lies with management. It is the responsibility of management to deploy resources, of which manpower is an important constituent, (see 2.2), so that desired objectives are achieved (5). In order to successfully deploy the manpower resources, then management must recruit them.

6.2 FUNCTIONS OF RECRUITMENT

Schuler (6) suggests that the principal purpose of recruitment lies in providing an organisation with a pool of aspirants who are deemed potentially suitable, Livy (7) concurs with this policy and sees recruitment as being concerned with:

i) locating suitable sources of supply

ii) communicating information relating to vacancies

iii) the generation of attraction in vacancies

Figure 6.1 illustrates the interactive relationships existing between the recruitment function and the organisational whole.

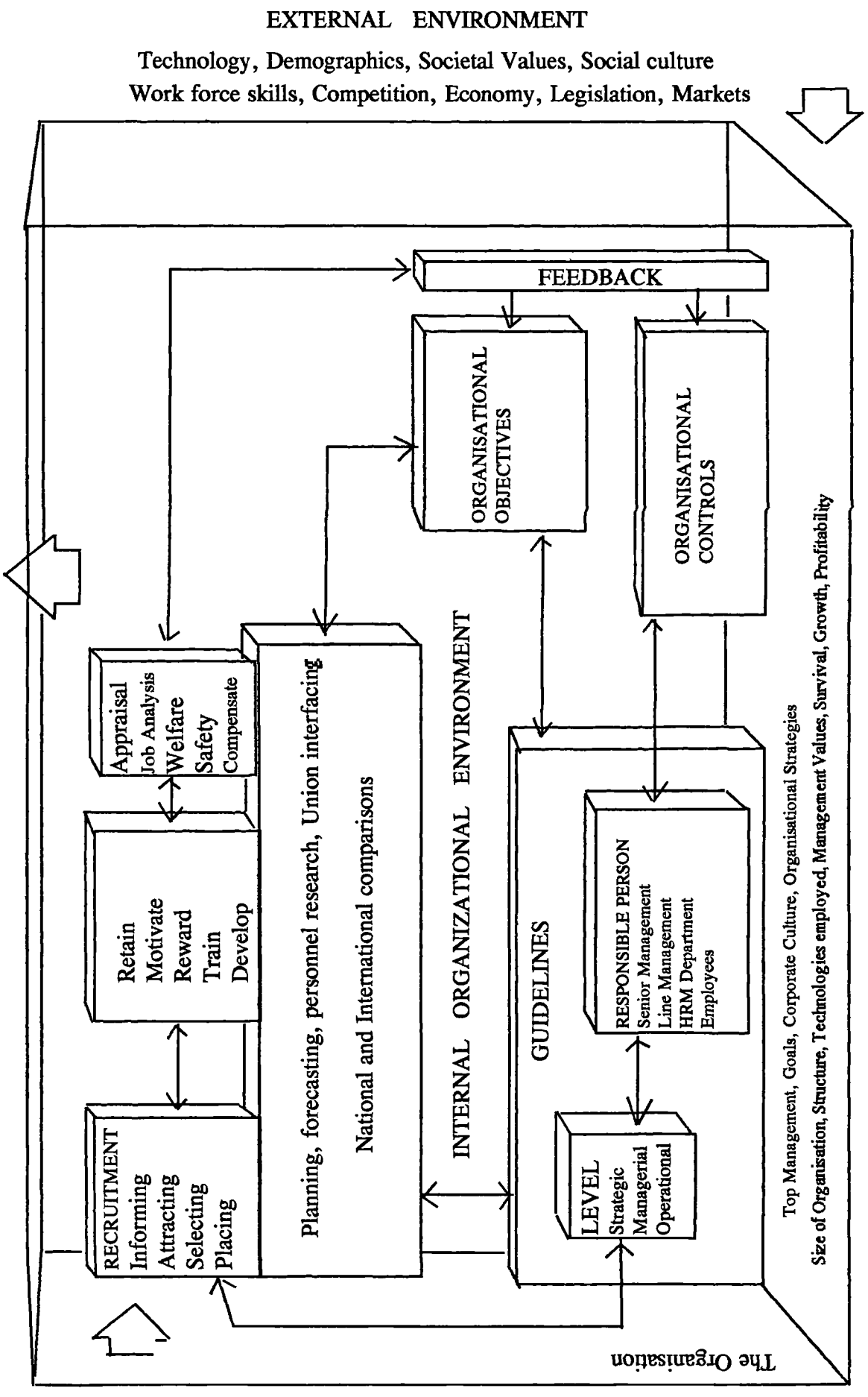

Figure 6.1 RELATIONSHIPS BETWEEN RECRUITMENT AND THE ORGANISATION

Consideration of Figure 6.1 illustrates that recruitment comprises several specific purposes and involves many important activities. Activities encompassed within the functional role include: planning and forecasting needs both on a long range and short term basis; job market analysis; development of effective recruitment programs; evaluation of recruitment effort and effectiveness; determining legal implications and ramifications; maintenance of records and databases; providing the applicant pool (8,9).

Consideration, in detail, will be given to two of these aspects, namely: the provision of the applicant pool and evaluation of the recruitment effort i.e. how effective is each source.

6.3 THE APPLICANT POOL

When a tender (for whatever type of goods, work or services) has been accepted and the contract signed, then the focus of attention shifts to considering where exactly all the resources, especially manpower, will come from.

Two basic sources of human resource supply are considered (10,11,12), these being those sources intrinsic to the organisation itself and those which are extrinsic to the organisation. Ford et al (13) bisect the sources intrinsic to the organisation into two sub-groups, namely "The Internal Labour Market" (ILM) and "The Extended Internal Labour Market" (EILM). The distinction being derived from the perception that ILM seeks to fill vacancies from the organisation's existing workforce, either by promoting or re-deployment, EILM operates to secure new recruits from those who already have tenuous links with the organisation e.g. friends or family employed there.

A range of the literature available (14, 15, 16) suggests that Intrinsic sources available to the recruiter include:

- Groomed candidates i.e. those undergoing training and some form of development for specific roles .
- Promotion of existing employees .
- Trawl of potentially suitable candidates.
- Interdepartmental transfer.
- Internal advertisement.
- Employee referrals.
- Retraining.

Available extrinsic sources, whilst in theory being boundless, are nonetheless fairly-well delineated in practice and include:

- Direct advertising, both locally and nationally.
- Government bodies and agencies.
- Commercial employment bureaux and agencies.
- Head-hunters or selection consultants.
- Schools (considered fully in a later subchapter).
- Colleges and Universities.
- Introductions.
- Re-employment of former employees.
- Casual call-ins.

A general typology of approaches to recruitment may be developed from the various sources. Figure 6.2 illustrates this typology, and this figure serves to underline both the cost implications and the diversity of the applicant pool being trawled.

Each of these potential approaches exhibit both advantages and disadvantages, and a brief summary of these is presented following Figure 6.2.

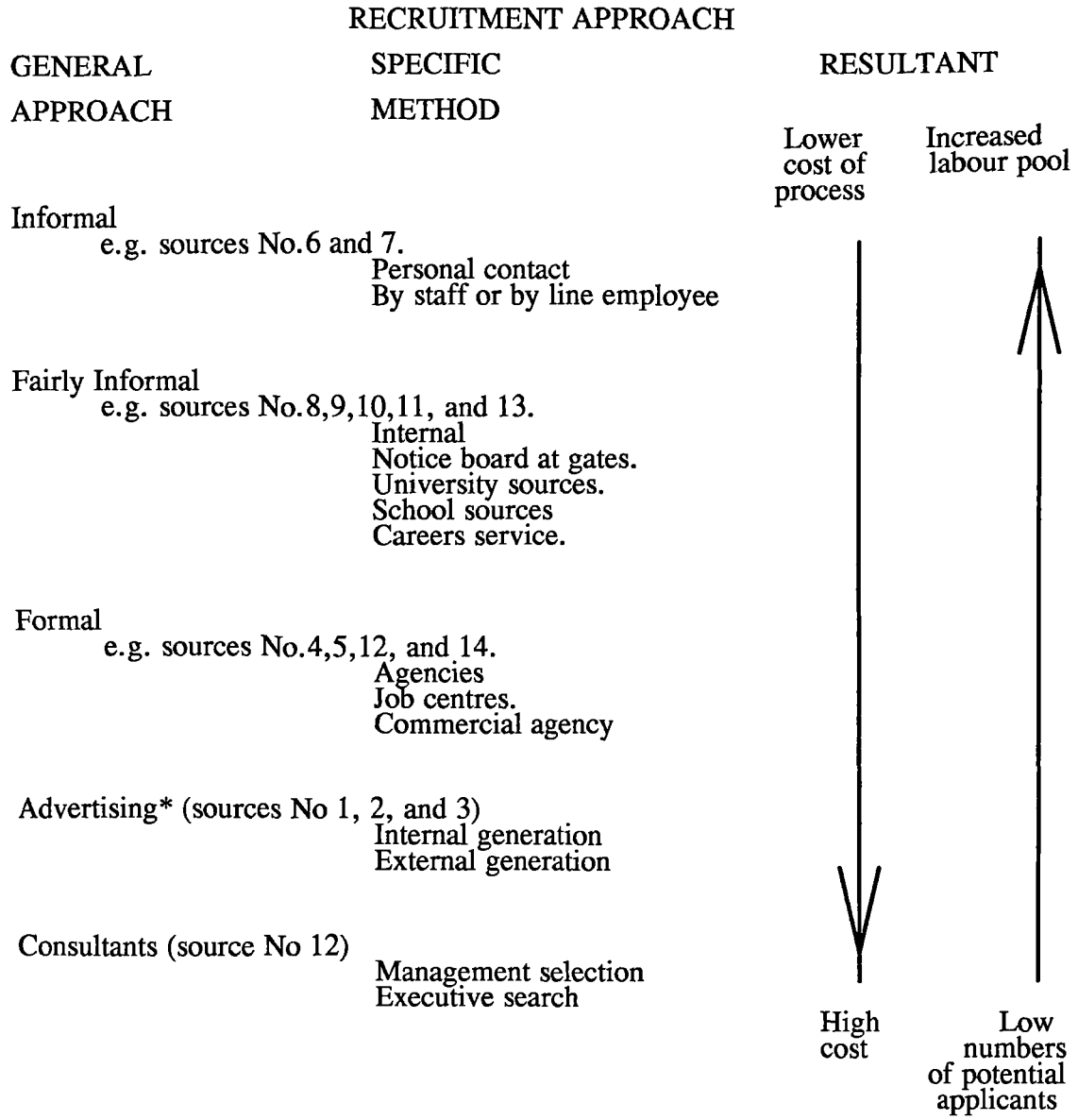

Figure 6.2 Recruitment Approach Typology * available for use in all approaches.

Informal:

Strauss and Sayles (17), believe that the new recruit supplied by satisfied employees is amongst the best source available to the organisation. Ullman (18), notes that 85% of employers questioned, preferred to utilise informal channels when recruiting particular staff. Hill (19), sums up the underlying belief by stating that "the quality of referrals may depend on the morale of the employees, the accuracy of the information and the closeness of the intermediary friend". The first two of these important factors having been amplified earlier. Costs borne by the organisation, when using this approach, are minimal but, accordingly, the actual range of applicant brought forth will be restricted.

Fairly Informal:

In order to increase the possibility of securing potential employees, the applicants should receive as accurate a picture of the organisation and the actual post open, as possible (20). This information may well lead to securing their fullest co-operation in the organisation's endeavours and satisfy the applicants' own needs i.e. meet expectations.

As the input from the organisation increases, so the associated costs rise i.e. in management time, reference take up, etc. The applicant pool has however widened and offers a much greater scope for selective processes.

Formal:

The greatest possible pool of applicants should now be available for selection. In order to achieve this enhanced group the costs attributable have multiplied significantly and may give no guarantee of long term success.

Consideration is given to the sources available as a prelude to a discussion on the efficacy of each source, it also allows the fuller picture to be developed of the recruitment sources available to the organisation.

6.4. RECRUITMENT SOURCES

Within the research consideration is given to fifteen possible recruitment sources:

1 - Local Press advertisement
2 - National Press advertisement
3 - Trade or Business Journal advertisement
4 - Recruitment Agency (main)
5 - Subsidiary Recruitment Agency
6 - Referred by current employee
7 - Re-employment of an individual
8 - Referred from school
9 - College/University "milk-round"
10 - Casual call-in to office
11 - Training Agency
12 - Head hunted
13 - Internal source
14 - Job Centre
15 - Other/Unknown

Whilst being some of the more generally applicable sources of recruits, the above list is not exhaustive. Radio and television sources are two amongst others which have

been omitted primarily on the basis of infrequency of use. Source number 15 i.e. 'Other' has been left entirely open to allow the respondents full reign in their response.

Each recruitment source may be seen to have advantages and disadvantages associated with its application:

Advantage	Disadvantage
Local Press Advertisement	
Encourages those seeking 'local' employment to respond to the vacancy	May not be seen as prime source of vacancy information
Local press incurs significantly lower insertion costs	Advertising format may lack sufficient punch to be eye-catching
Vacancy is kept within geographical constraints	
National Press Advertising	
Increased potential applicant pool	Significantly increased cost of inserting vacancy
Selected newspapers perceived as the spot in which to locate appropriate vacancies	Greater vetting of applicant required and associated administration increases
Image conveyed is that of a national organisation or at least an organisation operating nationally	Likely increase in overall benefits package i.e. cover removal expenses etc.

Advantage	Disadvantage
Trade or Business Journal	
Targeted population reading advertised vacancy	Low circulation periodical
Standard of applicant enhanced	All potential applicants may not respond or do so after closing dates
Recruitment Agency (Main)	
Applicants selected from nation wide sources	May produce staff who prefer limited tenure
Relatively quick response times	Internal applicants may be excluded
Early vetting carried out ensuring accurate candidate referral	Costs tend to be prohibitive and rise according to position filled
Recruitment Agency (Subsidiary)	
Anonymity ensured when soliciting applicant	Recruit may remain on database and be solicited again
Reduces administrative tasks	Element of mis-trust generated in-house

Advantage	Disadvantage
Referred by Current Employee	
Applicant fully versed in expected responsibilities and duties via realistic job preview	Restricted applicant pool
Referee offers some degree of guarantee as to applicant's suitability	More suitable applicants may be bypassed
Low cost to secure and administer	Reliance placed on existing employees
Referred from School	
Regular annual flow of interested applicants	Lack of genuine comprehension of organisations' aims, goals, structure, etc.
Early opportunity to secure suitable school-leavers	Substantial training in more 'real-life' skills required
College/University 'Milk-Round'	
Continuing source of graduates	Searchers are window-shopping rather than buying
Inexpensive and relatively simple to administer	Schedules for securing applicants maybe restrictive

Advantages	Disadvantages
Casual Call-In to Office	
Little administrative costs involved	Lack of background knowledge of applicant
Responsive to day-to-day needs	Close supervision in initial period may be required
Able to offer immediate use of skills	
Training Agency	
Source of carefully vetted applicants	Poor attitude from applicants
Subsidies may reduce employment	Short term tenure due to costs, agency restrictions or rules
Pre-training may reduce on-site requirements	
Head Hunted	
Specific candidate for specific post	Significant increase in post's professional fees
Reduced administration	Candidate may not integrate with existing structure or teams
Confidentiality	

Advantages	Disadvantages
Internal Source	
Provides maximum channel to employees	Applicant pool is severely curtailed
All internal candidates may consider applying	No comparison available between internal and external candidates
Reduced induction and training periods	'Clique' image conveyed to external environment
Relatively simple administratively to execute and low cost	

Considering the fifteen sources under the general typology of approaches, it can be discerned that 13% are informal, 33% are fairly informal, 27% are formal and 27% are available for allocation within any one of the three general approaches.

Many writers have studied the numerous modes of possible recruitment (21,22,23,24) but few have linked identified sources with the term of employment generated by each source.

Consideration of the linkage between recruitment source and employment duration may well serve to highlight the efficacy of each individual source and suggest those sources which should be utilised in preference to others. Decker and Cornelius (25), Reid (26) and Gannon (27) are amongst the few who have given in-depth consideration to recruitment sources and employee turnover.

A brief summary of the findings of those studies carried out which endeavour to quantify the link between recruitment source and employee turnover, assists in providing the background framework on which the present work is underpinned.

6.4.1 Investigations into Sources and Effectiveness

Much has been written in support of, or denouncing, specific recruitment sources. Schwab (28), concluded that employee referrals gained pre-eminence as the more effective recruitment source. This view is supported by Hill (29) and Ullman (30), who whilst quantifying their acceptance of the resulting data nonetheless conclude that this source is pre-eminent. Gannon (31), noted that the consistently better performer in providing stable employees was the source of re-employment of past employees. Taylor & Schmidt (32), also concluded that re-hires were the better attenders, higher performers and exhibited the longer durations of employment tenure.

The important concept emerging from all such studies is that sources do exhibit differential effectiveness and therefore study of these sources may be utilised by organisations to identify the most applicable source of applicants, relevant to their organisation.

6.4.1.1 Factors in Differential Source Effectiveness

Causal factors giving rise to differential source effectiveness may be addressed by at least two approaches.

The first considers differential effectiveness as a function of the realism found contained within the information relating to a vacancy passed onto the potential employee. Realistic information given by particular sources such as existing employees is considered more realistic than information given via e.g. advertisements or other sources. The information given by the more realistic source is believed to function as a 'realistic job preview'.

The second approach proposes that recruitment sources vary in effectiveness primarily due to reaching applicants from dissimilar populations. An advertisement in a quality

newspaper may not reach the same reader profile as an advert placed in one of the many tabloids. The deduction drawn is that the individuals recruited from the differing sources vary in respective abilities affecting job performance, values in job satisfaction, and therefore participation behaviour i.e. absenteeism and length of employment.

As discussed earlier realistic job previews may serve as a provider of realism for vacancy candidates. Wanous (33) hypothesised that the differential effectiveness of various sources of recruitment may be a function of the realism found within the information available relating to the vacancy. Of those studies reviewed, Reilly, Tenopyr and Sperling (34), Ilgen and Seely (35), Macedonia (36), Farr et al (37), Wanous (38), Youngberg (39), Weitz (40), four are clearly successful in exhibiting significant variances in turnover when considered with the availability of realistic preview information. Three studies note varying effects deriving from the realistic preview e.g. Reilly, Tenopyr and Sperling show that a significantly lower acceptance rate was obtained for those receiving a realistic job preview than those receiving favourable or those receiving no special information. An eighth study, that carried out by Manwaring (41), points to word-of-mouth recruitment as being extremely prevalent and indicates that this form of recruitment practice is advantageous to employers in terms of access to reliable supplies of employees, cost, appropriately skilled potential recruits, and a perceived reduction in both turnover and absenteeism. Manwaring also discusses how this form of recruitment affords the potential employee opportunity to access data and information on conditions, wage rates, organisational culture, etc.

Two studies carried out to consider the influence of "individual's differences" support the argument that the individual's characteristics do in fact precipitate differential source effectiveness.

Taylor & Schmidt (42), show conclusive support for individual characteristics as causes of differential recruitment source effectiveness. They note that with respect to

absenteeism and tenure their study shows strong support for the linkage between the individual's characteristics and differential source effectiveness. Breaugh (43) shows tentative support for the argument by noting that those recruited through newspaper advertisements lost almost twice as many work days as those recruited through other sources. Further description is given to the variance in work attitude exhibited by these same sources of recruitment where the newspaper advertisement generated recruits were the poorer performers. Both approaches predict certain characteristics of recruits and both may well be utilised by an organisation in order to fully account for and comprehend the source of referral deemed the most applicable.

Motivational issues considered earlier in the thesis are once again highlighted. The pervasive affects and effects of motivation and satisfaction are such that they may play a key role in determining the effectiveness of any recruitment source and thus influence the practices implemented by the organisation.

An area highlighted as a fairly informal (and therefore a reasonably low cost) source of potential employees is that of schools. Little effort has been devoted by the construction industry to winning minds and hearts at an early age.

6.4.1.2 School and Vocation

"Pupils from Airmyn First School are being taught building skills" as are those at Stanbury First (44,45). The comments attributed to children actually taking part in this 'filling-out' exercise suggest that they enjoyed the work involved. Few other such schemes are found in the education system and indeed, construction as a whole receives very little impetus from education. Given that the construction industry now accounts for some £40BN (46), more should be done to encourage aspiring school leavers to enter, or at least consider the industry.

The Royal Bank of Scotland, The Bank of Scotland, along with the Trustees Savings Bank., have long since seen the wisdom in catching them early. Between these banks,

they have opened 339 in-school banks (47), primarily operated by the pupils themselves, and the banks all agree in suggesting that the long term benefits i.e. a stable client base, will more than justify the investment made.

Scottish education offers the student the choice of some 98 subjects in The Scottish Examination Boards' ordinary, standard and higher categories (48). Of these 98 subjects only a limited number may be even remotely linked to the construction industry i.e. Engineering, Technical Drawing, Technological Studies, Woodwork, Metalwork, Physics, Computing Studies and Maths.

The Scottish Vocational Education Council on the other hand perceive the true impact of the construction industry and from a total possible range of 2505 National Certificate Modules, offers 412 modules specifically related to the built environment produced by the construction industry (49).

There can be no doubt that by the time the pupil is ready to leave school the golden opportunity to impress and persuade, will have been missed. St. Francis Xavier (50), epitomises the thoughts when saying "give me a child for the first seven years and you may do what you like with him afterwards". More must be done to enter schools and convey the message of the worthwhile and challenging professions available. The C.I.T.B. Report (51), illustrates the dire consequences of doing little or nothing. This report shows that of those 12-14 year olds questioned, 44% mentioned trades such as bricklaying, concreting, plastering, as the image they associated with the construction industry. A further 19% merely mentioned building in a general sense.

These numbers represent a vast potential army of employees who are receiving at best, misguided information, and at worst, completely false information, regarding the construction industry, as a whole. Gale (52) has shown that the image of the industry is capable of enhancement by means of 'Insight' courses. The results from the studies carried out into image change clearly demonstrate that the problem is not insurmountable, given that the appropriate resources and expertise are fully committed

towards attaining a worthwhile change. These 'Insight' courses may be viewed as realistic job previews. . Therefore in terms of motivation they may be seen as providing the vital spark which the individual needs in order to overcome some barrier towards entry to the industry as a whole and more specifically to enter some organisation.

As discussed earlier, realistic job previews are a strong motive force in the armoury by which recruits may be secured. Entry to schools with the intention of allowing children access to much more comprehensive information and time spent allowing 'hands-on' in the industry must be seen as a priority issue.

The expenditure of effort in this area can only serve to bolster the number of applicants generated by this particular source and may go some way towards developing a degree of long term commitment from those responding to recruitment from this source.

6.5 SYNTHESIS

Many areas have been considered so far and each of them has shed some light on the central issue i.e. how does the recruitment source influence the employee turnover within the construction organisation? In order to address this question the areas are shown as a composite whole within Figure 6.3. This model indicates the interaction between and within the many elements and highlights the importance of considering the central issue. Whilst the foregoing chapters have considered the elements shown in some detail, they are now drawn together into a model which allows the reader to grasp the wider appreciation of the subject.

Figure 6.3 shows that the various individual elements whilst appearing to act independently of each other do in reality influence others, and as such changes in one element may have significant effects on the composite model. The synthesis of the research paradigm is aided by using and integrating relevant areas of the material considered in earlier chapters. For instance:

Gannon's work provides the initial framework upon which to develop a broader picture which may nonetheless be made specific to the Scottish construction industry. His work whilst being at the forefront of theoretical appreciation was nonetheless limited in its scope, range and application.

Focusing on a singular organisation which offers a limited range of occupations and seeks recruits from a restricted labour market ensures that weaknesses are inherent in the research. The analysis of data given by such a short time period i.e. 5 years, may also contribute towards the inclusion of faults which could have been erased by considering data from a wider timebase.

Within this research the number of recruitment sources considered has been greatly expanded, from an initial research item which considered only seven sources to the present covereage given by fifteen sources. The organisational types have been enlarged to consider not only large, but also small and medium sizes. Also, the actual number of organisations considered will be increased from only one, and so provide a much broader range from which data may be extracted, and the work areas under scrutiny will also be expanded to accomodate a wider diversity of individuals and occupations. The inclusion of a much wider range of recruitment sources and organisation types/sizes reinforces and expands the research efforts carried out by the writers considered earlier.

The ramifications of labour turnover have also been considerably expanded, to consider more than just the direct financial cost of recruiting an employee, towards developing a wider appreciation of the whole picture of labour turnover ramifications. The impact on the organisation, the individual and the industry have been analysed in some detail. This expansion provides the reader with a much more comprehensive view of the likely effects or outcomes of labour turnover.

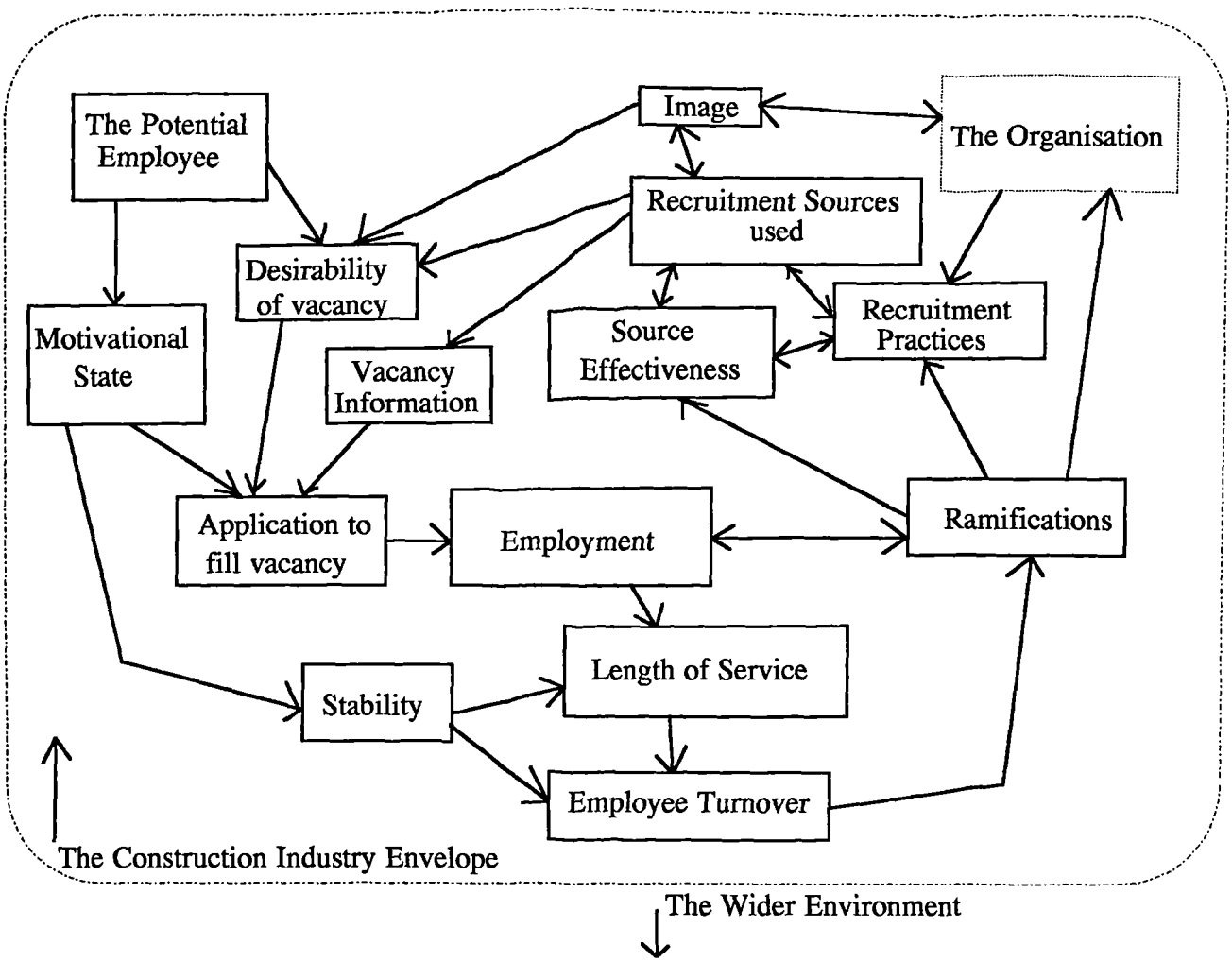

Figure 6.3 Modelling the Enigma

Integrated within the research has been consideration of the influence of motivational state upon the employee or potential employee. Many writers have considered motivation in all its guises but few have taken the issue and applied it to recruitment sources and employees. Many factors may influence the motivational state and these have been considered along with the wider issues of how the individual and the organisation interface.

Recruitment source effectiveness has been given scant consideration in the past, especially in times when the labour market was bouyant and employers faced little concern as to where the next recruit might come from. The much heralded demographic changes have provided some impetus for employers to consider the longer range view of labour markets, and in particular whether the sources will be internal or external to the organisation. The consideration of source effectiveness adds to the development of a wider understanding of the recruitment process as a whole and specifically the impact of using particular recruitment sources in preference to others.

The use of particular recruitment sources may well have significant impact on the 'perceived' image of the organisation and so have some influence upon the likely success of recruitment strategies implemented. This image may prove to have significant influence upon the motivational state of the potential or existing employee and so serve to reinforce or limit labour turnover.

Several writers have shown how quit rates for each of the recruitment sources considered may be developed, and this approach is fully integrated within the research in order to support and substantiate the objectives set out within the introduction. The development of quit rates for each of the sources aids in establishing which of the recruitment sources provides the more stable employee and also provides an indication as to where the longer term employee may be secured.

The hypotheses generated, literature reviewed, and research undertaken, have shown that the sources utilised in securing employees for the organisation may have significant impact on the effectiveness of recruitment and in practical terms, the stability and impact of the recruit on the organisation. No doubt exists as to the importance of research into this sphere of recruitment practice, rather, the question remains as to why such a relatively diminutive quantity of research has actually been executed in this area?

The organisation may gain significant benefits from use of the appropriate recruitment source, more than simply in monetary terms. From the stability point of view, the ability to be able to say with some degree of statistical confidence that a particular candidate is likely to remain for a period falling within empirically proven time parameters can only be seen as a 'plus point'. The construction industry has been shown to require individual employees and also certain squads, each of whom may be key players in the execution of contractual obligations.

Reduction in costs apportioned to the composite recruitment process must be viewed as worthwhile by management and this objective may be attained by precise targeting of candidates, rather than the adoption of a blanket approach towards securing the employee. Cost reduction/savings may also come about by skillful use of labour turnover at times of labour surpluses or shortfalls.

The recruitment process operates as a function of the industry generally and attempts at improving the effectiveness and efficiency of this process have been relatively limited. Research aimed specifically at improving this organisational function has been shown to be worthy of the effort directed towards it. Labour turnover must be subject to management control and this control must be founded on a solid understanding of the processes involved.

The research has taken a basic skeleton and expanded the concepts into a substantive effort to secure information and answers to hypotheses on recruitment sources and their influence upon organisational labour turnover. Which recruitment sources are more effective and therefore worthy of usage may be established by gathering and analysing sufficient data.

The literature available and past research efforts considered in previous chapters coupled with the synthesis model illustrated in Figure 6.3, shows that the research may provide important information affecting the recruitment process as a function within management of the organisations which comprise the construction industry.

Many other areas of worth and benefit have been discussed previously and serve to reinforce the basic tenet that consideration of the recruitment source utilised is beneficial to the organisation, directly, and of merit to the industry as a whole.

In order to find information and answers to the hypotheses raised within this research it is necessary to execute further research in the field. In order to do so, it becomes necessary to establish a methodology which will not only provide sufficient data, but also withstand the rigours of subsequent scrutiny, digestion and regurgitation. Replicability must also be considered since others may wish to verify findings of the research and where necessary, replicate the exercise. Bearing in mind the work carried out by earlier researchers, and to some extent avoiding their limitations, the approach to the field-work may be considered from several viewpoints i.e. those of:

the researcher actually carrying out the work; and,

the organisation under scrutiny; and,

the industry as a whole.

The researcher may be constrained by many factors and must seek to overcome these. The organisation providing the data must do so freely and willingly, and see clearly the potential worth of the research. The industry as a whole requires input which is informative, beneficial, factual, and capable of incorporation within everyday operational processes or procedures.

The following chapter discusses the approach to the field-work and establishes the methodology to be adopted and employed.

Chapter 7.0

METHODOLOGY

7.1 METHOD

Establishing a methodology for undertaking an advanced piece of research demands that many constraints and variables are given due consideration. The methodology chosen must also take into account reliability, validity and replicability. Others may well consider the subject matter and the research work itself, seeking to expand and reinforce it or to find some fault.

All research projects are limited by time but none more so than those for post-graduate degrees and dissertations where the quantity and quality of output is substantial. Consideration therefore needs to be given to the approach and selected method, which are able to meet the constraining time element. Sources of data and references should be available to assist in both the literature review and the research. Bailey, (1), lists several sources e.g. Libraries, Periodicals, Dissertations; use will be made of these and other sources.

These considerations and, what may be perceived as constraints, will bear on the purpose, approach and to some extent, the depth of the topic being researched.

7.2 RESEARCH CLASSIFICATION

Howard & Sharp, (2), give a definition of research as being action "seeking through methodical processes to add to one's own body of knowledge and, hopefully, to that of others, by the discovery of non-trivial facts and insights".

In addition to classification by field, such as the social sciences, life sciences, physical science, etc., Howard & Sharp identify three other classifications, which do not preclude in-depth knowledge of the researcher's subject. Stapleton (3) expands on the definition, into areas of practical ability and application, seeing research as being:

a) search or enquiry which is executed with care; and/or,

b) seeking to discover facts by scientific study; and/or,

c) engaging in a course of critical investigation; and/or,

d) a process which expands and advances the frontiers of knowledge.

The focus of research may be seen to be the element of the unknown. The element of the unknown being facts to be discovered in their own right, or relationships between unknowns. Leedy (4) rightly asserts that research is a cyclic process; in the beginning is the unanswered question, this leads on to the clear statement of the problem, which directs us to sub-divide the problem into appropriate sub-problems, this leads us to postulate hypotheses which in turn send us seeking for facts which will be collected and assimilated, this in turn leads to interpretation of, and finding meanings within the facts, which hopefully will support or reject the hypotheses and thus answer the question set, or pose a set of new questions. The research need may be chronic or episodic, with the episodic research need being the more difficult to cater for, due to its non-permanent nature. The researcher engaged in work for higher degrees must view the research effort in the light of both camps i.e. the degree work is episodic since there may be little further concentration on the area considered after the successful completion of the thesis, but their also exists a chronic need for research on a variety of topics and interest areas.

7.2.1 Purpose of Research

The four common and generally accepted purposes of a research project are:

a) To review current and existing knowledge

b) To establish and describe some situation or problem

c) Construct something novel

d) Explanation

Lin (5) sees research as being directed towards detecting regularities and offering clues to possible solutions to problem areas. The research being executed in order to satisfy conceptual or theoretical reasons and also to state pragmatic or applicational reasons. Therefore it can be argued that the purpose of research is subject to consideration by the individual asking the question i.e. not everyone will agree on the same underlying reasons, but will be able to put forward some form of justification for the research effort being expended.

7.2.2 Approach to Research

The majority of research projects are approached by one of the following methods:

a) Laboratory experiment
b) Field experiment
c) Case study
d) Survey

Each approach being useful to the researcher at various points in time and under appropriate circumstances. Wax (6) traces the foundations of research approaches to their origins and highlights potential pitfalls for, in particular, the field-worker. Filstead (7) sees objectivity of the researcher as a key element within the approach selected for implementation. The researcher must maintain a balanced relationship and utilise appropriate supports in order to obtain this objectivity.

7.2.3 Nature of Research

Howard & Sharp acknowledge Grinyer (1981) as the author of this approach where the variation by nature and type of contribution to knowledge is used as a classification being:

a) pure theory
b) testing of existing theory
c) specific problem solving
d) description of the state of the art

7.3 CONSIDERATION OF THE SUBJECT

The decision as to which methods to employ in studying the efficacy of recruitment sources employed requires that a review of the constraints applicable be carried out. The major constraints may be seen to be time and the access to the data which is considered to be suitable and adequate.

Time is particularly relevant since the research, to be seen as beneficial, must have relevance on a time-base i.e. if purely historical then it may have little applicational or informational significance.

The quantity of data required in order to ensure validity, accuracy, depth and width, soon amasses and places significant constraints upon the researcher in terms of; collection, especially where substantial records or databases have to be searched; collation, into some form of coherent mass of data and information sources; analysis, such that the data gathered is discernible as meaningful or not; interpretation, in order to arrive at some sensible deduction or conclusion; summating, so that the data and subsequent findings are coherent, meaningful, logical and sound; and presentation of the research and findings into a format that others will be able to access and find constructive.

7.3.1 Approach to The Research

Several conceptual models have been put forward by others to serve as a basic guide towards a systematic approach. Without a systematic approach then the research will be inefficient.

Tudor (8) analysed the processes involved in inquiry, arriving at six elemental constituent components, which are subject to influence from the wider environment. These elements were seen to have boundaries which overlapped at the borderlines and thus were determined to be 'loose' fits. Figure 7.1 illustrates the interaction of each of the elements and highlights the 'grey' areas which may be found at element boundary interfaces.

Developed from Tudor, 1982, pp14-42.

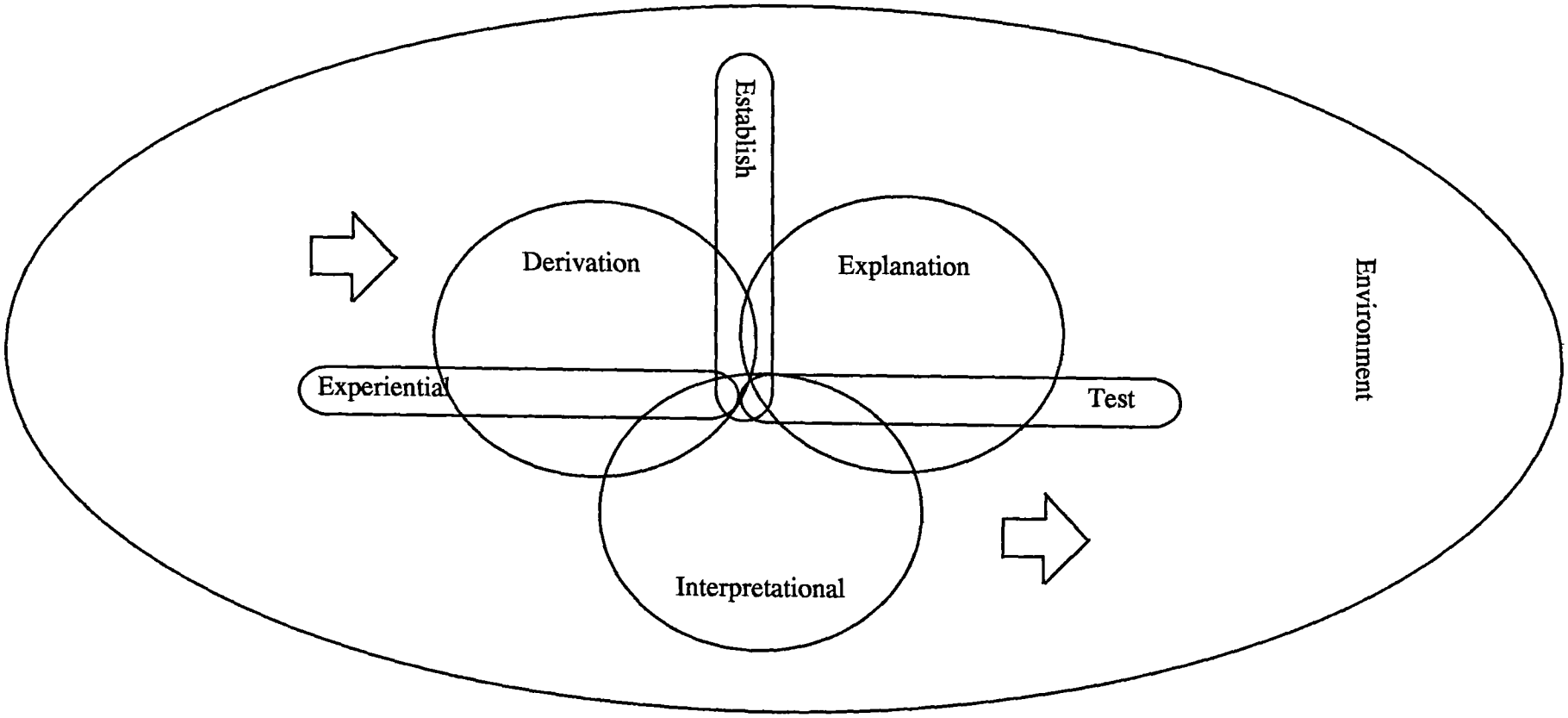

Figure 7.1 Inquiry Process

Whilst, admittedly, being seen as loose fitting, the elements of: experience, interpretation, derivation, testing, establishing, and explaining, do mesh together to form a cohesive approach to inquiry.

Each of the elements contribute towards the development of the composite process:

Experiential:

being aspects of our world or environment which we encounter and perceive as being significant and/or problematic. Reasons for, and underpinning, the encounter being perceived as totally open ended.

Interpretational:

preconceptions will bias all individuals towards some standpoint and/or view. The preconceptions held being subject to the influences of time, and the situation i.e. not all preconceptions will always apply in all situations.

Derivation:

being the use of, and the establishing of, preconceptions, based on experiences gained earlier and those still arriving. Personal and situational factors will influence the derivative processes.

Test:

where we compare, review, and evaluate the interpretations against new experiences which may emanate directly or indirectly from other experiences.

Establish:

the 'truth' as we see it is compiled and is put forward within the social context.

Explanation:

the 'truth' is utilised in explaining further experiences and aids in the development of understanding of our world. The environment within which the experiences are being gained and the inquiry is taking place, will have a major influence on the process as a whole.

Rummel & Ballaine, (9), proposed a six step model which comprised, "a felt need, the problem, the hypothesis, collection of data, concluding belief, and general values of conclusion". Each of these steps may be viewed in isolation but develop greater synergy when taken as constituent elements of the overall process of 'inquiry'.

7.3.2 Applicable Methods

In considering the 'approach' to the topic, time would suggest that as wide as possible surveys be executed in order to secure sufficient quantity of data and ensure width and depth, by gaining access to a range of organisations.

Descriptive surveys have been considered as a means of collecting data but rejected on the grounds that:

i) observation is seen as the principal means of data capture;

ii) the study population requires to be chosen carefully, specifically delimited and clearly defined, in order to achieve discretion;

iii) distortion may be transported into the research via bias in the research design;

iv) validity and accuracy of data and conclusions must be ensured at all times, and be replicable.

Thus the qualitative nature of descriptive surveys would suggest that they are of little value when one of the primary objectives is to ensure reliability and replicability. Validity none the less is an important issue, strongly emphasised by qualitative, empirically based studies.

The approach towards the technique which is seen by the quantitative researcher as being the optimum, will, hopefully, ensure reliability and replicability. The issue of replicability has been well argued by Borg and Gall (10) and Bauernfeind (11) who note the essential role it fulfils in any programme of inquiry. It may be argued that an

essential element within the research is the capability of the work to stand up to later scrutiny in the form of replication by others, working in other locations or situations.

The subject does not lend itself to laboratory experiment and thus by its nature reinforces the choice of comprehensive field-work as being considered the most suitable approach. The Analytical Survey veers away from trying to describe what the data is trying to say, towards collation of primarily numerical data and the application of statistical tools in order that inferences may be drawn from the meanings which lie within the data. The use of inferential statistics will aid in the resolution of problems relating to estimation and hypotheses with a statistical base.

Thus the Analytical Field Survey is perceived as being the more appropriate method to be employed in this research, and the method capable of providing the greatest quantity of appropriate data.

7.3.3 Data Sources

There are three main sources of primary data for a study of the referral sources utilised and acted upon by management of construction industry organisations:

writings on recruitment sources, and their implementation in the wider business environment, including material relating to the wider, general, practices of human resource management,

interviews with those involved in the day to day implementation of theory and practice,

case histories of organisations and situations, or instances, which have been well documented.

The possibility exists for the comparison of primary data obtained from the above sources with secondary data from ongoing recruitment activities and developments in the field. In the first instance data from a suitable source may be used as the 'Guinea-pig', this data being gathered by means of the execution of a Pilot Study.

7.4 THE PILOT STUDY

There are no results presented for the Pilot Study, only coverage of the processes executed and feedback data on the exceution of the Pilot Study generally. This feedback data being used as a tuning instrument for re-focusing the overall approach to the fieldwork.

The Pilot Study serves several ends in itself in that it:

identifies respondents; and,
clarifies characteristics sought; and,
enables refinements of applicable instruments; and,
highlights the feasibility of the research; and,
clarifies operating procedures; and,
focuses and enhances data analysis procedures.

The opportunity is also afforded the researcher of immersion within the respondent's social environment and thus be able to gain valuable insight and comprehension of the complexities and dynamics of the organisation's environment. The researcher is also able to commence trial analyses of the collected data and feed the results into the general context of the research body. Hypotheses may thus be reviewed, if only superficially, in order to establish their cohesiveness or need for adjustment or reformulation. Since this research is founded on several hypotheses, the Pilot Study provides a golden opportunity for review and re-appraisal.

The anticipated availability of suitable organisational records and ancillary data suggests that ample opportunity will be afforded to capture sufficient relevant information. In reality the organisations approached proved to be somewhat reluctant

to participate in research of any kind, let alone research which delved into the organisation's personnel records. Even though the utmost confidentiality was assured at all times, there was still substantial resistance to any incursion into organisational records. A barrier to this research and all such research generally.

In order to secure sufficient quantities and quality of data, fourteen (14) organisations were approached and asked to participate in the research. These organisations being as typical a cross section of the industry as possible i.e. small, medium, and large organisations, as well as a variety of professions, work areas and geographical locations.

With an industry as diverse as construction then care must be taken to secure as representative a sample from the wider population as constraints will permit. The overriding limit on the actual sample is of course the commitment of the organisations themselves; they must be willing participants in the research. The organisations selected were split into three broad categories:

i) those which provided some form of technical service to the industry e.g. Surveyors, Architects; and,

ii) those which carried out activities directly on site; and,

iii) those which provided raw materials or components which would be incorporated within the industry.

Considered alongside each of these three broad bands was the geographical location of the organisation, in order to reduce the bias towards one location or other.

Table 7.1 and Figure 7.2 show the organisation contact matrix used in striving to ensure that the organisations selected would provide the required industry width and depth. Note that there is no significance to the organisation numbers, at this stage they act simply as a reference point.

Organisation Number	Work Area	Location	Size
1	3	Central	Medium
2	1,2	Central	Large
3	2	East	Small
4	3	Central	Small/Medium
5	1	West	Medium
6	1,2	West	Large
7	1	East	Medium
8	1	West	Small
9	2	East	Small/Medium
10	2	East	Small
11	2,3	East	Large
12	2,3	West	Large
13	2,3	West	Large
14	2	Central	Medium

Table 7.1 Organisation Contact

Work Areas: 1= Technical Services: 2= On Site; 3= Materials/Components
Size of organisation is based on number of employees:
Small <200, Medium >200<500, Large >500

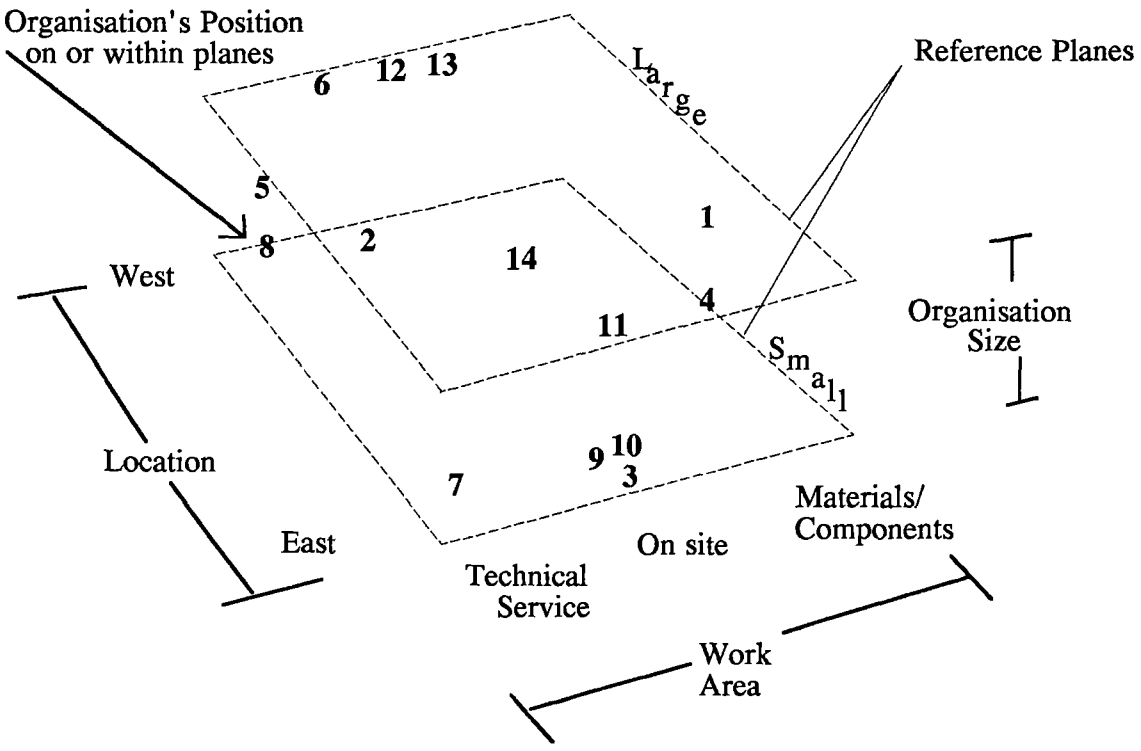

Figure 7.2 Organisation Selection Matrix

Each organisation's position is plotted relative to the three axes i.e. Location, Size, and Work Area

Table 7.1 and especially Figure 7.2, shows that there is a wide spread of organisations within the research which will hopefully lead to an ample variety of data sources and available data.

The organisations were contacted in two batches; the first batch being an approach to 6 organisations seeking their participation, followed by a second tranche of approaches to a further eight organisations. A batched approach being executed in order to provide an opportunity for the first batch to respond, so that the response level from these might be analysed in terms of positives and negatives and also in terms of organisation size, type, location and work area. The second batch of approaches being aimed at making up whatever shortfall in organisation types, etc., may have been exhibited in the first batch. The two batches were considered appropriate bearing in mind the likely time lag between making the initial approach and actually receiving some form of response; time of course having a direct influence on the researcher.

Of the fourteen organisations contacted only six (6) responded favourably. One of these, although showing initial enthusiasm, subsequently placed so many restrictions on the access to the personnel records that the resulting data made available would have been meaningless. The other eight (8) organisations offered many reasons (excuses) for refusal to participate in the research and samples of these refusals are shown in Appendix 1. The five (5) organisations who actively participated in the research have been outlined in the introductory chapter and are discussed in detail in a later chapter.

7.4.1 Feedback from The Pilot Study

Having executed the Pilot Study it enabled certain conclusions regarding the methodology and hypotheses to be arrived at.

The Pilot Study was conducted on the premises of the Organisation henceforth to be known as No1. The data retrieved from this organisation's records and subsequent findings will not be discussed in this subsection, rather the input to the overall research process will be the focus of attention. The actual data will be considered in some depth in a later subsection of this chapter.

7.4.2 Procedure

The original methodology envisaged a questionnaire being forwarded to the organisation for their completion and subsequent return to the researcher. The organisation was asked to complete the questionnaire as fully and as quickly as possible.

Several important issues were highlighted by the execution of this Pilot, namely:
i) the reliability and validity of the data; and,
ii) the time involved; and,
iii) the reluctance to release certain "delicate" pieces of information; and,
iv) the poor condition of the organisation's records; and,
v) the correctness of considering the recruitment sources chosen for inclusion.

Items one and five above are perhaps the most important in that the reliability and validity of the collected data is the fundamental cornerstone of the whole research. If the data is invalid or unreliable then any subsequent analysis or derivation of conclusions must be faulted. The sources of recruitment (discussed in Chapter 6.4) were found to be appropriate since they were actively being used by all the organisations.

Item two above raised an important issue which affects all researchers, that of the time taken to collect the data. The organisation saw the allocation of valuable resources, to a task which might only have tenuous benefits for them, as being of very

low priority. Therefore the time taken to collect the necessary data took slightly longer than might have been expected from an organisation which was prepared to commit sufficient resources to the task.

Item three proved the greatest concern in terms of resolution. The organisation simply would not release data concerning items which might be seen to be of commercial worth to rivals, even though the utmost confidentiality was assured at all times.

Item four manifested itself through several features:

a) the organisation's inability to extract the required data due to in-house records not being immediately available; and,

b) files being located in other than the 'normal' places; and,

c) files being poorly maintained e.g. irregular updates; and,

d) the general lack of attention to details which might prove useful or necessary at some future point in time.

From the outset of the Pilot Study it was obvious that the organisation had their own ''peculiar' in-house style and format for the human resource records, the maintenance of which was delegated to lower levels within the administrative hierarchy. Data extraction therefore proved to be time consuming and tedious.

Whilst much is made of the importance and applicability of Information Technology within organisations, the pilot organisation had made no efforts what so ever to apply IT to maintenance of human resource records, even though human resource records, by their very nature, lend themselves to applications founded on databases. This shortcoming was to be found in **all** the organisations which participated within the research despite the perceived benefits of the use of IT.

7.4.3 Use of Feedback

The execution of the Pilot Study produced meaningful learning experiences and also provided a useful review of the use and applicability of the research instrument i.e. the questionnaire. The feedback was taken onboard and incorporated within the future main research methodology. An unambiguous emphasis was placed on the fact that the researcher would carry out a detailed search of all available human resource records thus relieving the organisation of any need to provide resources other than the physical documentation and a suitable desktop. The intrusion into the human resource records was clearly stated to be under the greatest possible levels of confidentiality. This assurance of minimal resource requirements undoubtedly assisted in convincing the organisations to participate in the research.

Collection of the data by the researcher also resolved some of the other issues raised. The data collected would be reliable and accurate in terms of the research, the time involved would be reduced to the minimum possible due to personal commitment towards the research, and the idiosyncrasies of each organisation's in-house styles would be negated by the personal collection of the data rather than asking the organisation to complete a questionnaire which they did not feel completely happy with.

7.5 ANALYSIS OF THE PILOT STUDY AND OTHER DATA

Having executed the Pilot Study, the resulting data requires to be processed in some meaningful fashion, this sub-section outlines the feedback on the approaches available in order to analyse the data. The sub-section does not present any detailed analysis of data, only consideration of the approaches to analysis.

The analysis of data serves several ends in that: it communicates the value of the findings, whether they be in social, scientific or academic terms; it strives to convince the reader that this knowledge value enhances the perception of contribution to the

research in question; and that the research itself is seen as being of a standard worthy of academic acceptance.

Analysis may be taken as the process of ordering and structuring the data in such a manner as will allow the production of knowledge, and as such, involves both quantitative and qualitative methodologies. Much emphasis is placed on the quantitative analysis of data in particular, through the application of statistical techniques, which it may be argued stems from the mathematicians seeking to provide solutions to scientific problems primarily directed towards philosophers.

Analysis must be seen to have a purpose, whether this be 'description', 'construction of some scale', 'generation of relationships', 'explanation', or 'prediction'. The research undertaken for this study will seek to address several of these underlying purposes. On the basis that the analysis is deemed appropriate and accurate, then the researcher is free to concentrate on an important aspect of any research i.e. the consideration of its depth. With application of robust statistical techniques then the probability of rejection due to lack of depth should be minimised.

Within this research the data is subjected to statistical resolution by means of One-Way and Two-Way ANOVAs. The ANOVA (Analysis of Variance) seeks to find which of any factors present, or combinations of factors, has an appreciable effect on final results, and to quantify each factor's influence on the overall variability of the result under consideration (12,13).

Other statistical techniques e.g. Contingency Tables, are available which will suggest relationship, trends or links between the various sources of recruitment and the employee turnover, but few will provide the robustness and accuracy of the ANOVA.

In calculating the ANOVAs, use was made of SPSS-PC (The Statistical Package for Social Sciences-Personal Computer), running on an IBM compatible 386 (eventually a

486) processor. The output from the calculations are shown whereas the actual calculations are not, but these may be considered by referring to works such as:
Freund et al, Elementary Business Statistics, 5th Ed., Prentice-Hall International, London, 1988, pp408-430. or Daniel W.C. and Tewel J.C., Business Statistics, 4th Ed., Houghton Mifflin Company, London, 1986, pp300-344.

These works clearly illustrate the processes involved in analysing the collected data and interpreting the results from the calculations.

7.5.1 Statistical Analysis of Data

Using the SPSS poses several problems in itself:
i) the user must be fully acquainted with the software package; and,
ii) the hardware used will determine the time consumed on each run of the package; and,
iii) the data being fed into the package must be in an appropriate format; and,
iv) the user must be able to make sense of the output.

Item i) is overcome by repeated use of the package itself, the on-line help facility within the package providing appropriate prompts and guidance where necessary.

Area ii) is very much dependent on the physical quantity of data present. As the data collected was fed in, so it became obvious that the more there was to process, so the slower the machine became. With an increase in the computer's processor to that of a 486, so the processing times reduces dramatically.

SPSS will not take any/all data as collected by the researcher. there must be some form of filtering/sorting in order that the vital components are input for processing. With patience and effort the initial data was sifted into the appropriate format. This sifting being achieved by means of a spreadsheet (EXCEL4) and database/wordprocessor (WORD for WINDOWS). These pieces of software being more than capable of taking in large quantities of data, sorting them into the

appropriate format and providing the required output in a variety of modes. Therefore item iii) is resolved with the application of diligence and effort.

In seeking to resolve item iv,) it is encumbent upon the researcher to study sufficient literature and examples of the statistical technique as will allow the researcher to become familiar with, and able to apply, the resultant output from the calculations.

The Pilot Study not only provided input to the data extraction and collection processes and other cogent areas, but also aided in focusing the research itself on the hypotheses under consideration. The initial analysis of collected field data also provided an early insight into the support, or otherwise, which would be given to the underlying hypotheses.

7.6 UNDERLYING RATIONALE

Proceeding on the basis that the reader having digested the foregoing chapters now comprehends the topic under investigation, then logic points to the consideration of the reason/s for bothering with the research in the first place.

The review of current literature, coupled with collection of field data may go some ways to contributing, however insignificantly, to the database of existing knowledge. Locke (14) et al, in seeking to explain why a study is worthwhile suggest that pointing to "potential utility of results in either or both of two domains" may be sufficient justification. These domains they see as being:

the contribution to the evolving structure of knowledge; and,

the applicability of the study in practical situations.

Both being areas which in themselves suggest great utility, and if conjoined, then offering great scope for utilisation.

7.6.1 Nature of Contribution

The constraints previously described suggest that this topic will require to be a summative description of the past and of the existing situation in several companies. Pure theory and the testing of existing theory require the time that can only be made available through a research degree, and must therefore be reviewed with this borne in mind.

Consideration has been given to the various constraints and choices in this research project. It is concluded that within these constraints, the research should proceed as analytical field surveys of organisations and their practices along with review of published theoretical data. Statistical analysis of the collated field data will enable trends to be highlighted, links to be established and support, or otherwise, be given to the basic underlying hypotheses. The Analytical Survey will allow as wide a range of organisation types as possible to be surveyed and thus ensure that the research is broad and deep, so aiding in replicability i.e. by its non- specificness, and reliability. The organisations chosen for survey will be as representative of the wider industry population as the research constraints will permit, bearing in mind the resistance that may be exhibited towards the researcher seeking to scan through organisational information. Indeed the resistance to intrusion may well prove to be the greater barrier to be overcome.

As the research progresses, so the opportunity will be afforded to the researcher to reconsider the methodology selected and the effectiveness and applicability of the study.

The following chapter considers the data collected from the analytical surveys and to some extent the analysis and interpretation of this data.

Chapter 8.0

RESULTS OF THE RESEARCH

8.1 THE MAIN STUDY

As discussed in Chapter 7, an integral part of good research is the Pilot Study and feedback from, and the analysis of, this Pilot Study proved beneficial in providing a launch pad into the main study, and also aided in the resulting composite analysis of the main body of the research.

Reporting on the Main Study will take the format of an initial report outlining each of the individual organisations; followed by analysis of each of the organisations, which comprises descriptive statistical information and subsequent evaluation; followed by a secondary report which pulls together the data from the individual analyses and provides support for the inferential statistical analyses. This compilation report section will lead towards the discussion of the findings and conclusions emanating from the research.

8.1.1.The Contributing Organisations

Organisation No1 provide Project Management services to a variety of clients in West-Central Scotland. Their office is located in the centre of Glasgow, and at the time of the study the total staff complement was 51 persons, the majority of whom were male.

Organisation No2 is perhaps the largest Direct Labour Organisations in Scotland, serving the major proportion of its Regional Council's building needs. At the time of the study there were some 2061 weekly paid operatives employed within the organisation.

Organisation No3. is a producer of specialised domestic components which are utilised in commercial, domestic and industrial buildings. Their principal production facilities are located in Falkirk with subsidiary/ancillary plants in England. At the time of the study the records for 101 employees were made available, the majority of whom were male.

Organisation No4 are amongst the largest practices of Surveyors in Scotland. The head office is located in Edinburgh, with regional branches throughout Scotland. During the data collection there was a total staff complement of 178 individuals, with the majority again being males.

Organisation No5 provides an ancillary education service to the construction industry, with its principal location in the centre of Glasgow, with annexe locations on the periphery of Glasgow. Due to this peripheral nature of the organisation in terms of true construction activity it may be argued that this qualifies the organisation for inclusion in the role of 'control'. At the time of the study, access was granted to only 56 weekly paid employees' records, the majority of whom were male. The foregoing information is summated in Table 8.1.

	Organisation				
	1	2	3	4	5
Location	West	West	Central	East	West
Nature	Limited Co.	Local Authority	Private Co.	Partnership	Local Authority
Work area	Project *Management*	Repair/ *New*	Comp- *onents*	Surveying	Ancillary
Size*	Small-medium	Large	Medium	Medium	Medium

Table 8.1 Organisation Descriptions *overall employee strength

As discussed in Chapter 7, the ability to offer as broad and as representative a sample as possible was given careful consideration. The data in Table 8.1 shows that the range of organisations is wide and the nature of the work undertaken is suitably diverse. Employee strengths of the organisations complements those found within the industry itself. The location of the organisations is also sufficiently diverse as to eliminate any particular geographical bias or trend within the research. The data collected from these organisations represents a valid sample of the industry as a whole and may be seen to be as free from bias and error as the constraints placed upon the research will permit. No doubt much greater co-operation from other organisations would have ensured even greater quantities of valuable data.

The Sources of Recruitment used by the five organisations are as shown in Table 8.2. From this table it may be ascertained that the sources considered within the research were valid, due to their use by the majority of the organisations.

Organisation	Source of Recruitment (key to numbers shown below)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No 1	x	x	x	x	-	x	-	-	x	-	-	-	-	-	x
No 2	x	x	-	-	-	x	x	x	x	x	x	-	x	x	x
No 3	-	-	-	-	-	x	-	-	-	-	-	-	x	x	x
No 4	x	x	x	x	-	x	x	-	x	x	x	x	x	-	x
No 5	x	-	-	-	-	-	-	-	-	x	x	x	x	x	x

x = used, - = not used.

Table 8.2 Composite Recruitment Sources

Numerical indicators have been given to each Source of Recruitment and henceforth in the narrative these source numbers will be referred to rather than their full textual description.

Key to source numbers.
1 = Local press advertisement, 2 = National press advertisement, 3 = Trade or business journal advertisement, 4 = Recruitment agency, 5 = Subsidiary recruitment agency, 6 = Referred by current employee, 7 = Re-employment of an individual, 8 = Referred from school/careers dept., 9 = College/University 'milk-round', 10 = Casual call-in to office/return of application blank, 11 = Training Agency, 12 = Head hunted, 13 = Internal sources , 14= Job centre/D of Emplt., 15 = Other/unknown e.g. phone call, letter.

Table 8.2 shows that the Sources of Recruitment were well used by each of the organisations, with many of the organisations using a variety of sources on a repeat basis. The only source common to all organisations was Source No15 (other/unknown), and the reasons for the inclusion of this source and its use by the organisations are considered within the following narrative.

Each of the organisations are now considered on an individual basis, in detail, and descriptive statistical support used to complement the narrative

8.2 ORGANISATION No 1

Organisation No1 is actively engaged in providing Project Management services to a wide range of clients in West-Central Scotland. Their office is located in Glasgow, and at the time of the study the total staff complement was 51 persons, the majority being male.

The organisation utilised seven (7) discrete Sources of Recruitment when recruiting staff, each source providing a varying percentage of the total staffing. The sources actually utilised are as shown in Table 8.3.

Organisation	**Source of Recruitment** (key to numbers shown below)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No 1	x	x	x	x	-	x	-	-	x	-	-	-	-	-	x

x = used, - = not used.

Table 8.3 Sources of Recruitment Utilised

Key to source numbers.
1 = Local press advertisement, 2 = National press advertisement, 3 = Trade or business journal advertisement, 4 = Recruitment agency, 6 = Referred by current employee, 9 = College/University 'milk-round', 10 = Casual call-in to office/return of application blank, 15 = Other/unknown e.g. phone call, letter.

From these seven sources the organisation recruited the various percentages of the total staff cohort as shown in Figure 8.1.

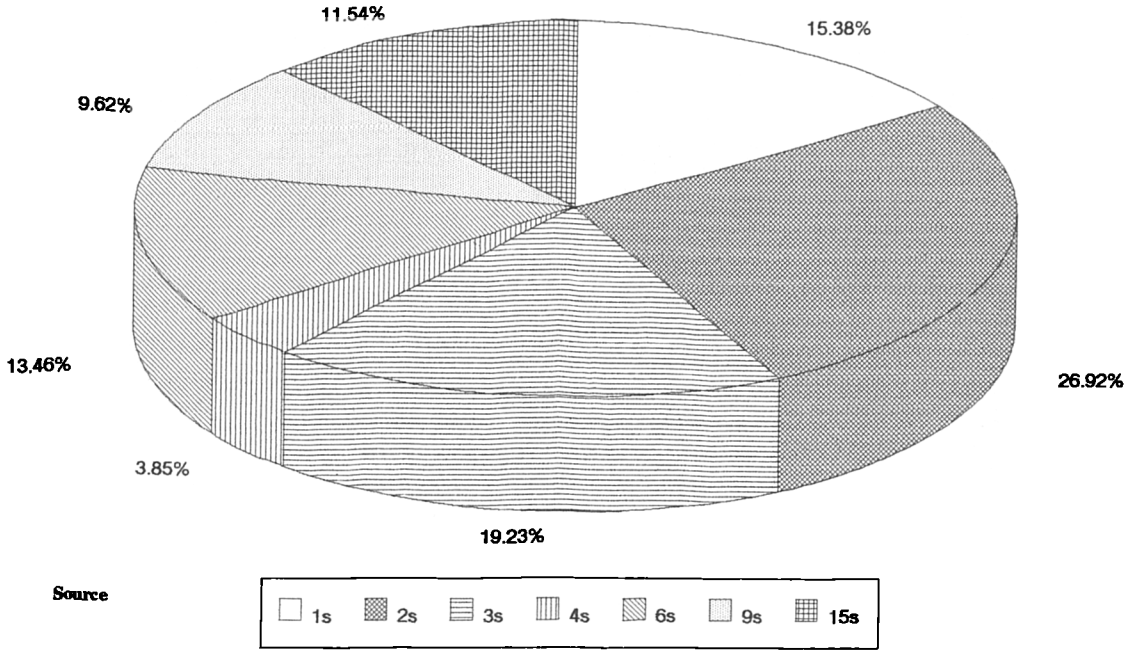

Figure 8.1

The actual numbers of individuals are as shown in Figure 8.2, and from these figures, source number 2 (National press advertisement) is seen to be the predominant source in terms of percentage staff recruited. Whilst the organisation does not operate on a Nation wide basis they nonetheless appear to recruit a substantial proportion of staff from such advertisements.

The underlying demographics of each of the source groups is an area which requires much deeper and detailed research in order to fully comprehend the motivational influences at work on each source group and also to ascertain if there are specific factors at work within each of the source groups. Several of the theories underpinning motivation have been considered in Chapter 3 and it may be considered that the whole, or aspects of, one or all of the theories are operational within each of the source groups.

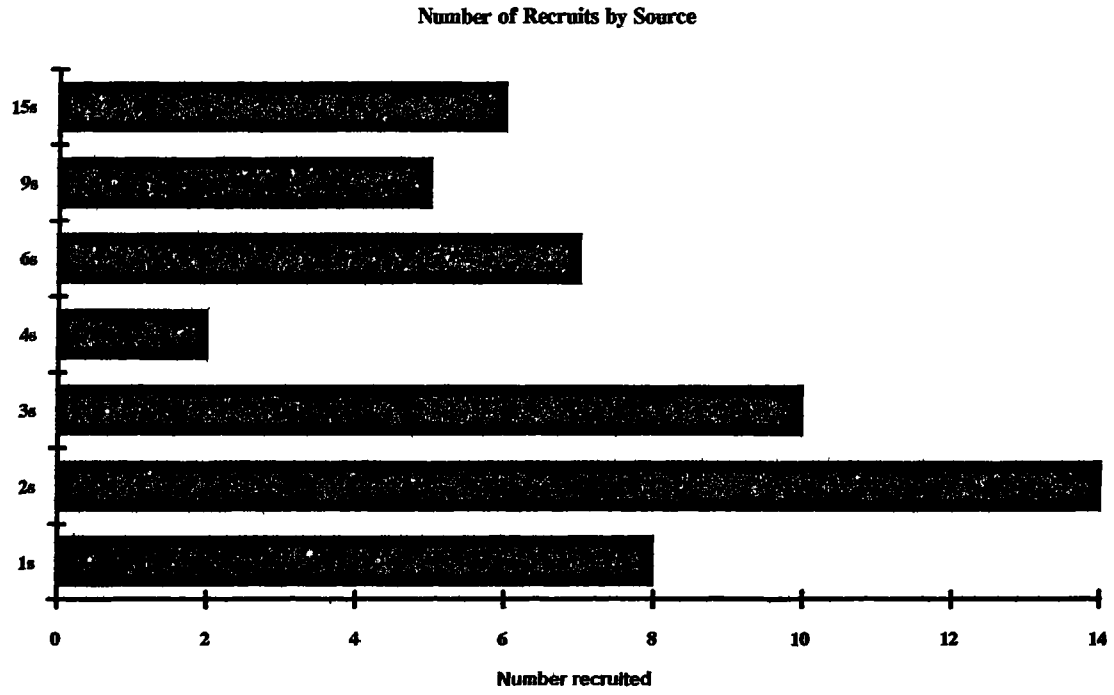

Figure 8.2

Consideration of the demography of each source group highlights other interesting aspects of their composition. Figure 8.3 illustrates the age ranges for each of the Sources of Recruitment. From this figure it can be ascertained that the use of Recruitment sources No1., No2. and No3. (Local and National Press and Trade or business Journal, respectively) has produced the largest groups of employees in the lower age band. Conversely, sources No4., No6., No9., and No15. have produced the largest groups with the greatest ages. This would tend to support the contention that the younger recruits are seekers of 'live' job vacancy information, whereas the older recruits rely predominantly on 'dated or established' sources. The argument may be made that the younger recruits are still ambitious, interested in a wide range of issues surrounding their chosen occupation, keen to succeed and highly motivated, therefore they give greater attention to these 'live job specific' sources of information. The wider, more positive, social and professional images conveyed in published media may also have some bearing on the respondents expected from an advertisements placed within the publication's covers.

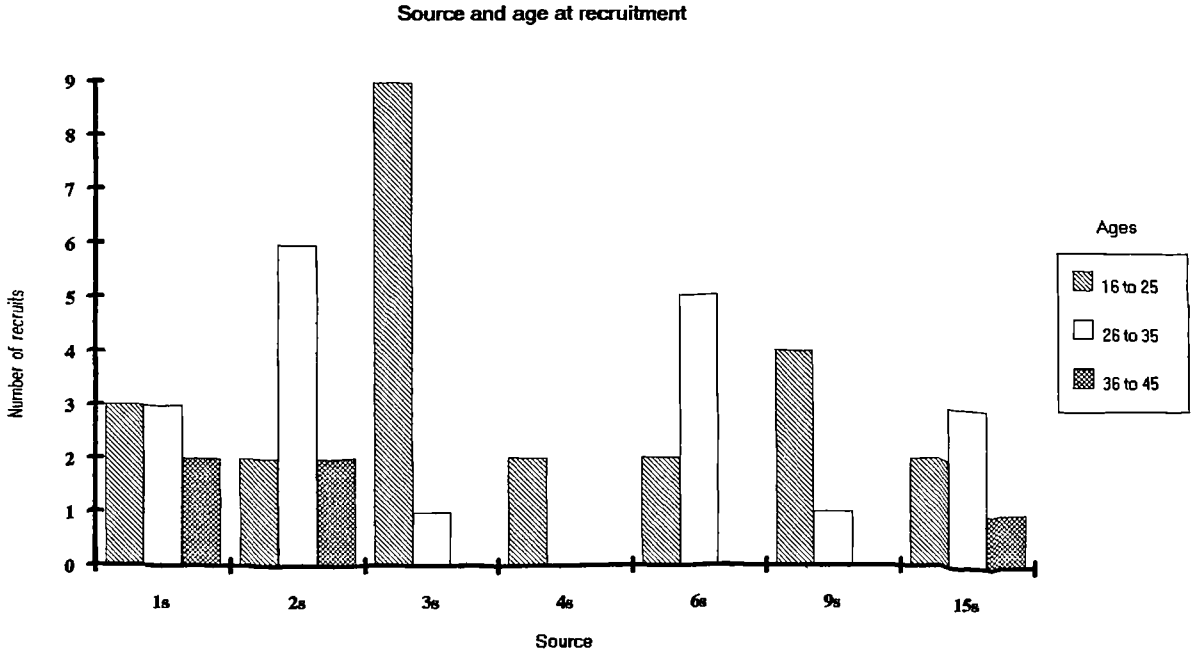

Figure 8.3

Many journals in themselves may be perceived as dynamic, striving, challenging, and stimulating, to which their readers feel some degree of empathy. The older recruits on the other hand may simply be seeking an organisation which they perceive as being 'solid' due to the methods used in conveying vacancy information. These sources employed by the older recruits may be perceived as well established and entrenched formats, utilised by organisations which believe they have a long term future. This long term future or job security may be one of the key elements which drives the older applicant to respond to the vacancy.

The distribution of males and females for this organisation is shown in Figure 8.4, which indicates some clear divides in the sources utilised by males and females. No females were recruited via source No3, nor any males recruited via source No4. These two sources may be described as sex exclusive i.e. only males coming from source No3 and only females coming from source No4. The other Sources of Recruitment utilised indicate a mixture of both male and female recruits. Figures 8.5 and 8.6 add further clarification to the distribution of sexes and ages within the organisation. The organisation may be said to be 'youthfully male', since the predominance within the workforce is towards males below the age of 36 years. The

females display a greater bandwidth of ages, with none greater than 45 at age of recruitment. The argument is put forward that this lack of women recruits over 45 years of age shows a missed opportunity for the organisation. Potential recruits who are women greater than 45 years of age may well be seen as the more productive and stable worker since many of the pressures associated with female early years i.e. marriage, childbirth and raising the family, are behind them and thus release the individual to concentrate fully on the chosen occupation.

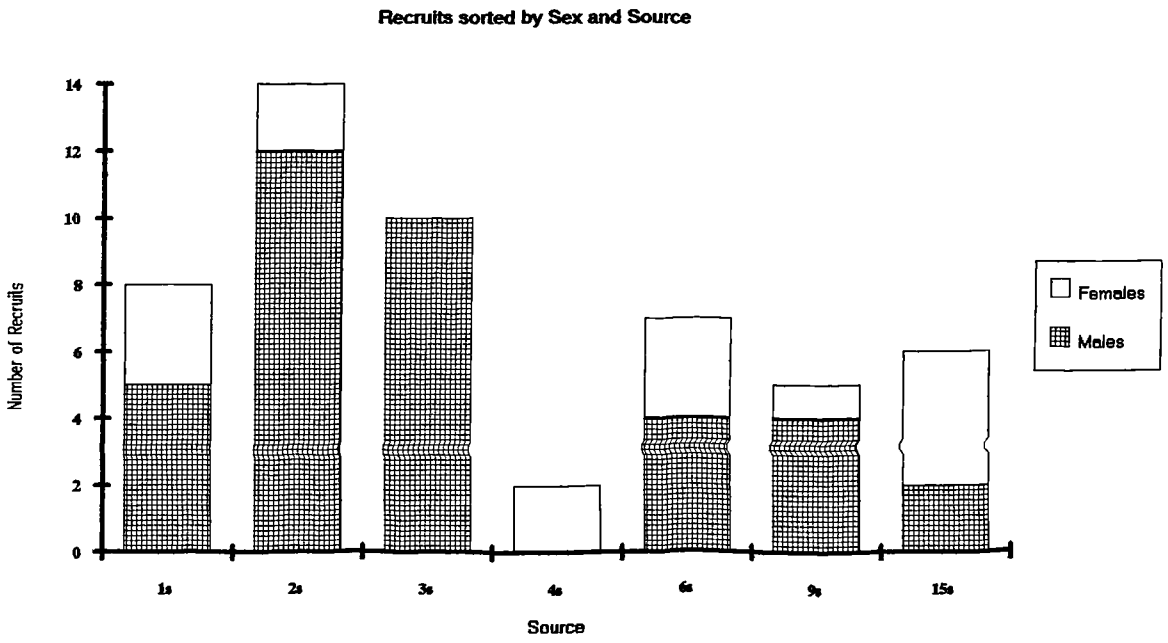

Figure 8.4

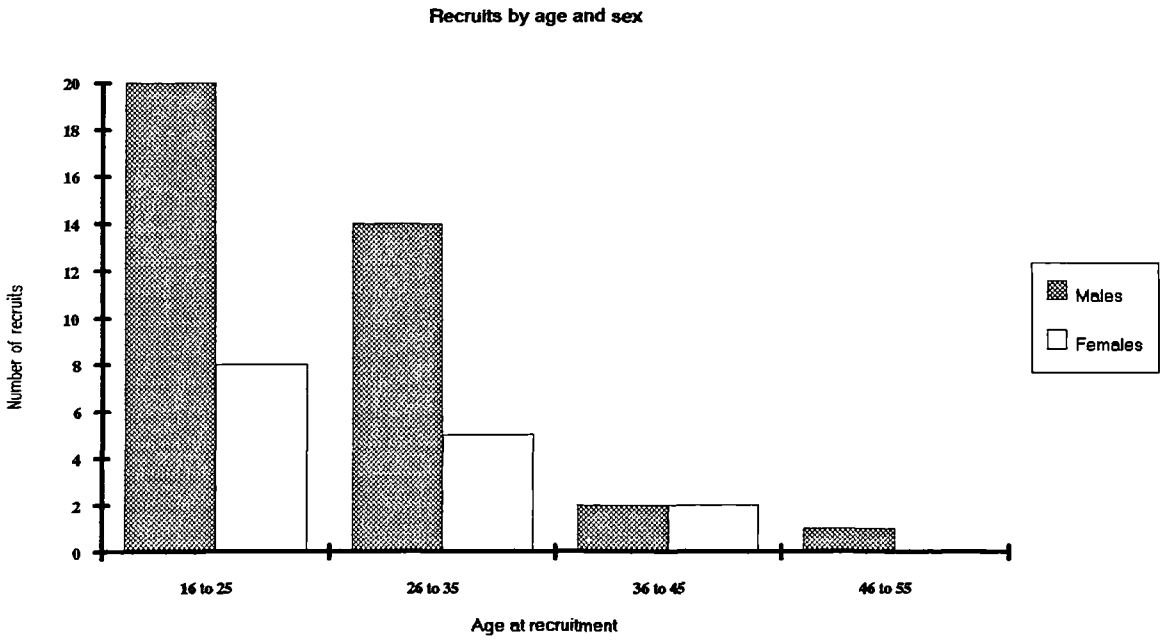

Figure 8.5

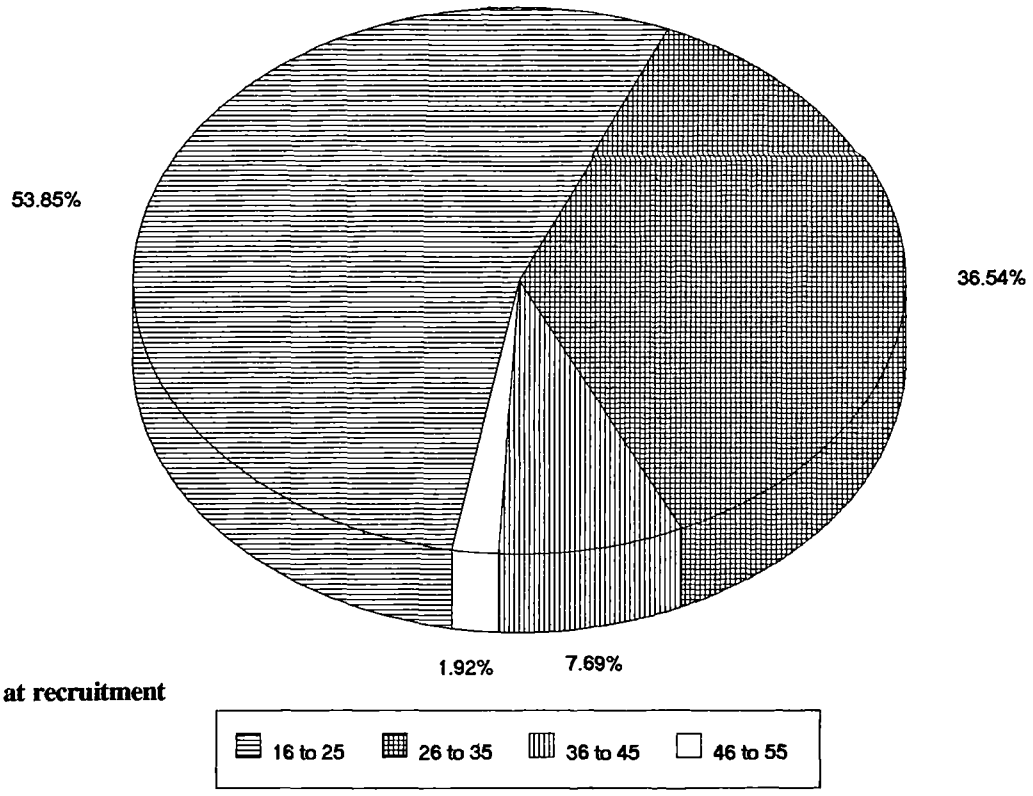

Figure 8.6

Whilst data for all years of the organisations existence are not available, those that were made available have been analysed in terms of the numbers of recruits taken from each source of Recruitment each year. This analysis is shown in Figure 8.7 which clearly indicates several favoured Sources of Recruitment. Source No3. has been utilised during 8 out of the 16 years; during the period 1986 - 1990 source No2. has been used to secure a major proportion of staff recruited. The actual numbers of recruits secured each year are shown in Figure 8.8, with the peak recruitment occurring in the late 1980's. The data shows that the organisation secured a mean service of some 5.85 years from the employees, the greatest number of employees giving a length of service which falls within the band of between 1 and 5 years.

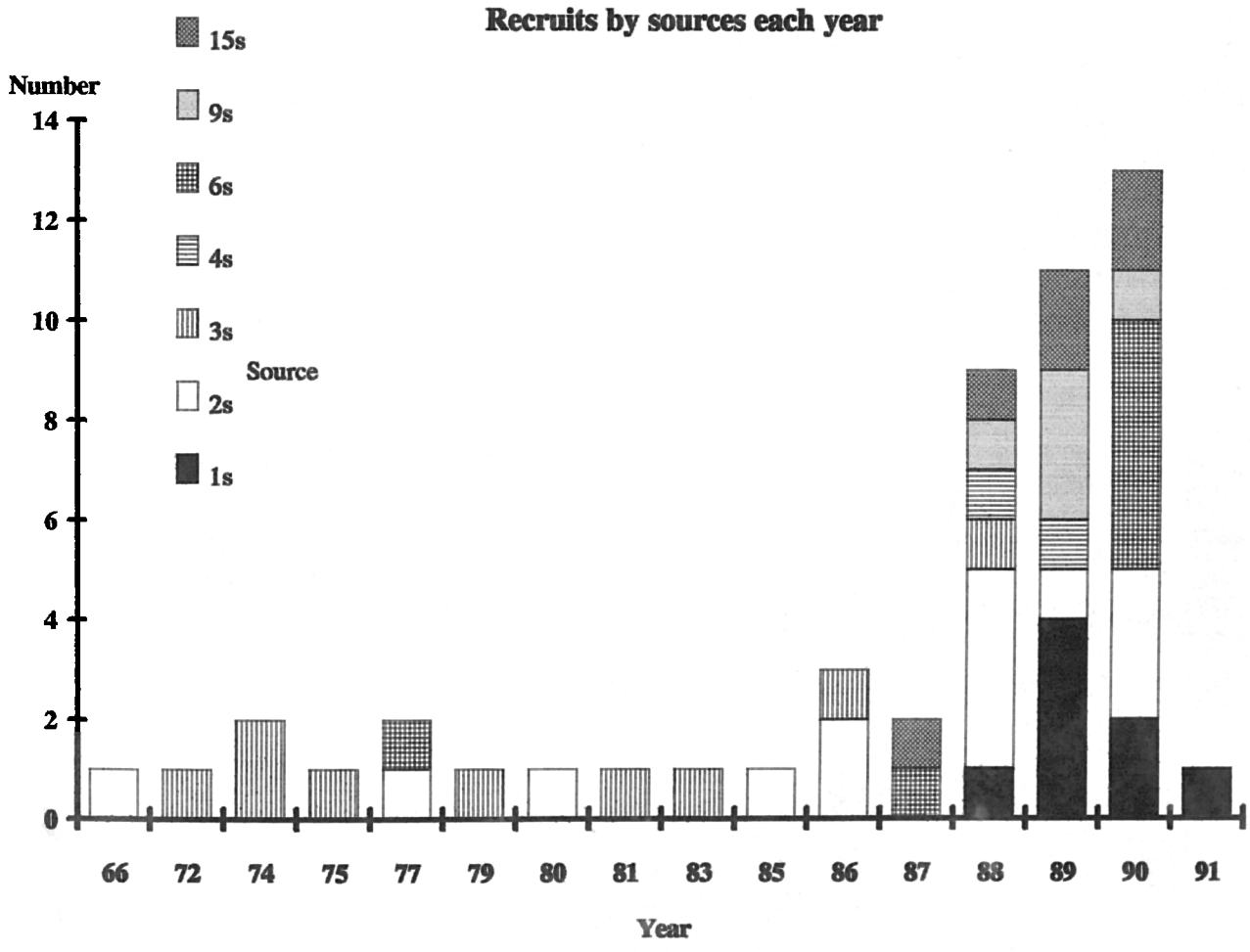

Figure 8.7

Figures 8.9 and 8.10 indicate the service periods and the numbers of employees who serve longer than, or less than, the mean service period of 5.85 years. Both males and females within the organisation tend to have a preponderance for periods of service between one and five years, as shown in Figure 8.11 and 8.12.

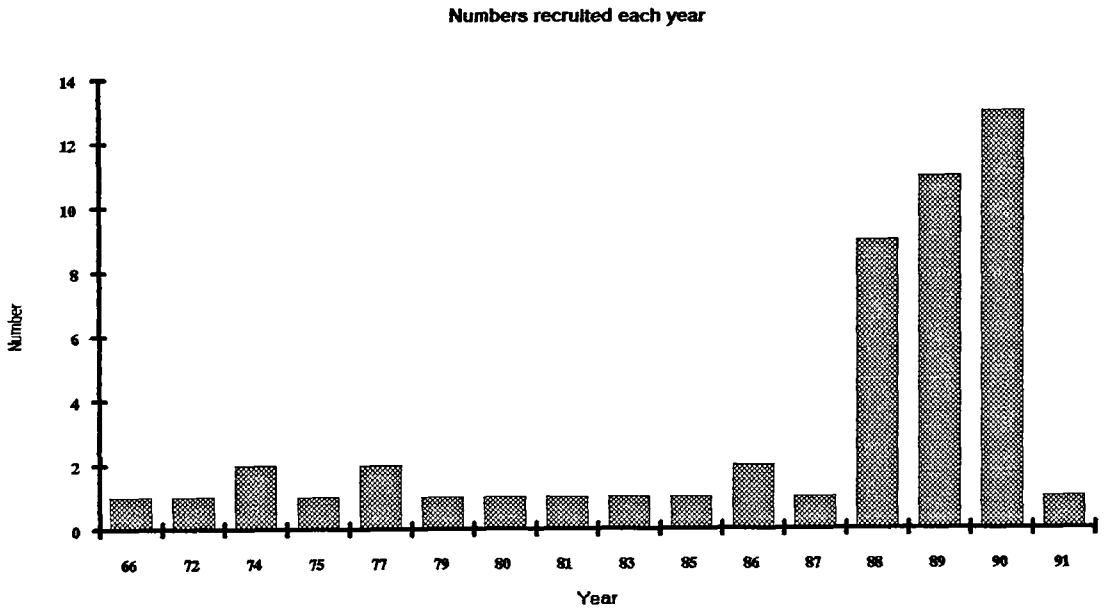

Figure 8.8

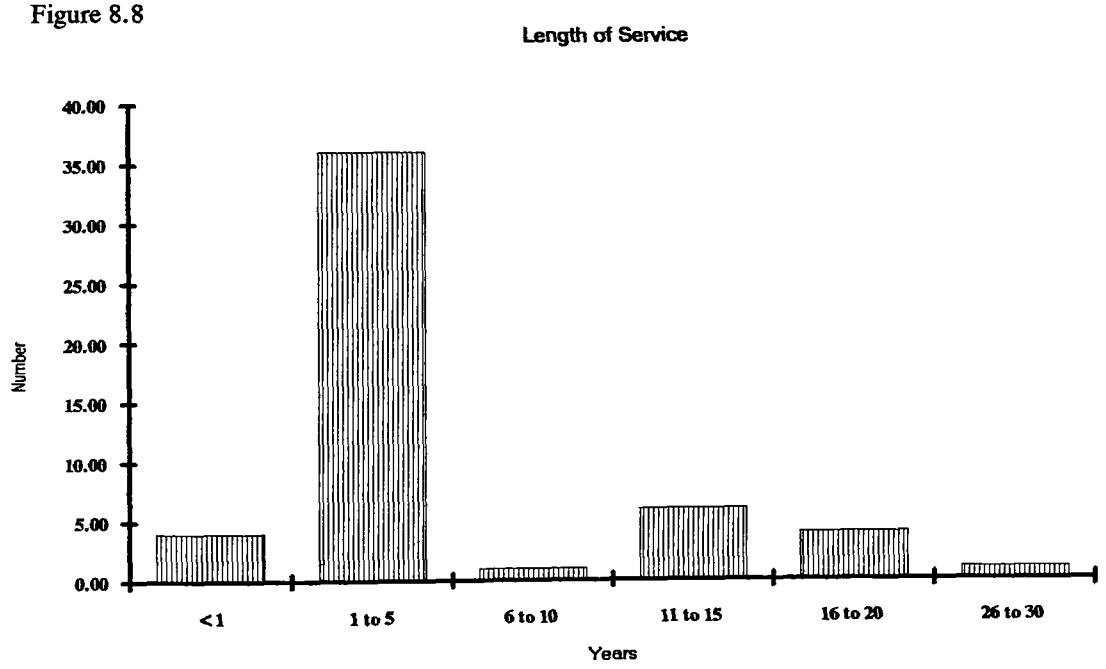

Figure 8.9

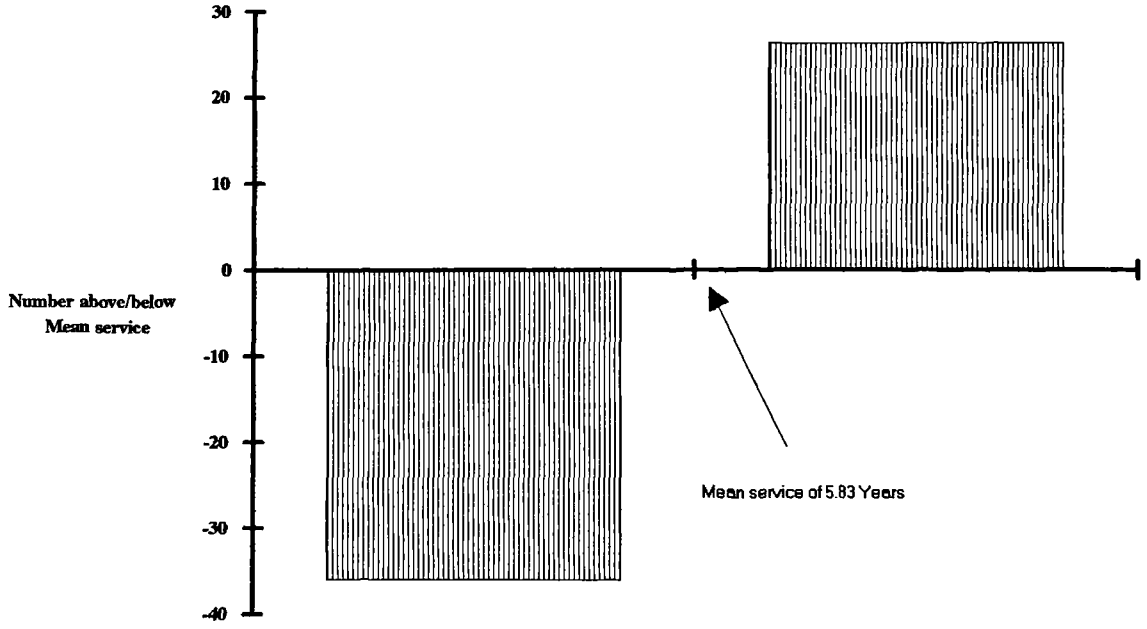

Figure 8.10

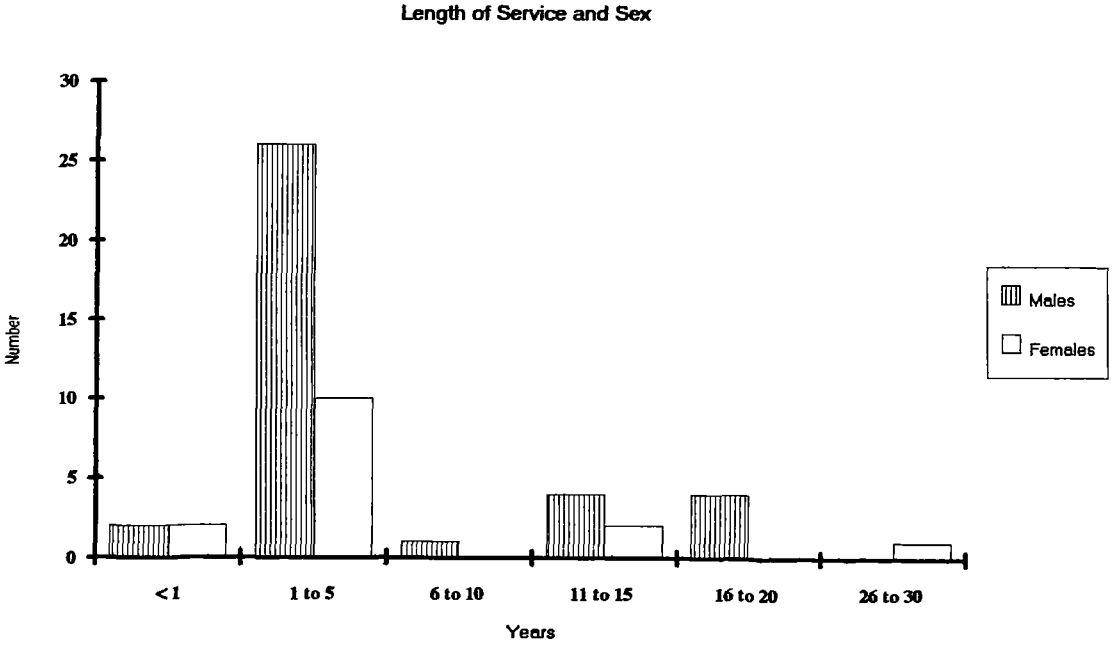

Figure 8.11

When the Sources of Recruitment are considered in relation to length of service then a clear 'better performer' emerges, as shown in Figure 8.13. Source No3. gives a significantly greater mean length of service and its variance from the organisation's mean length of service is one of only two positive values. Prima Facie evidence that the use of source No3. leads to an increased length of service from the recruit.

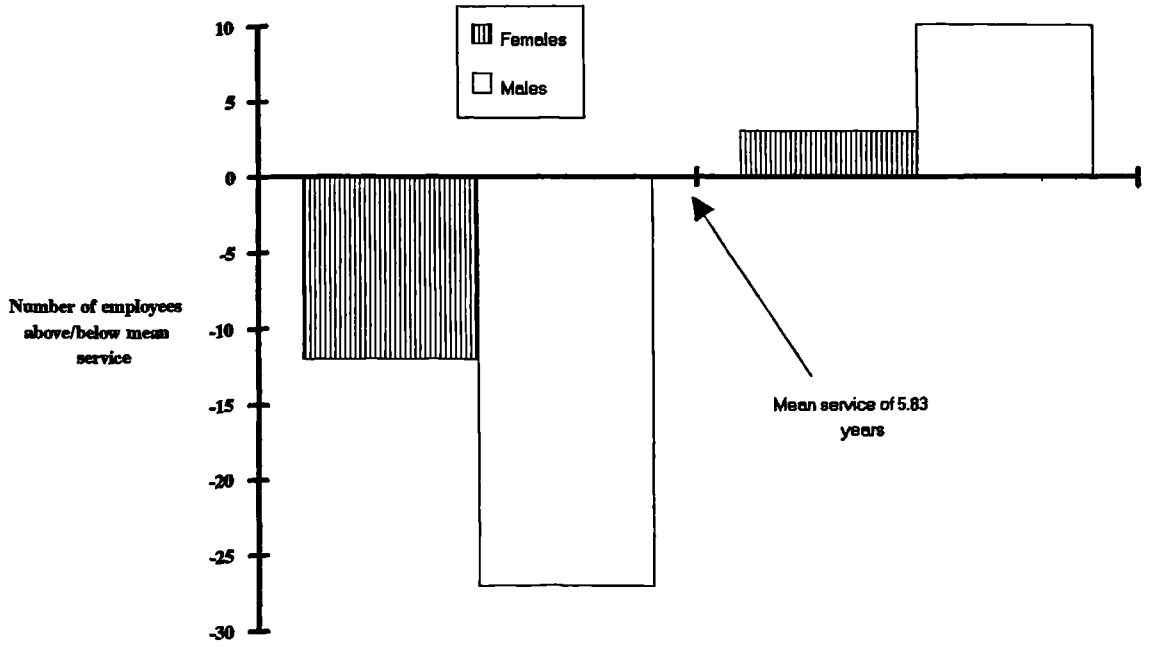

Figure 8.12

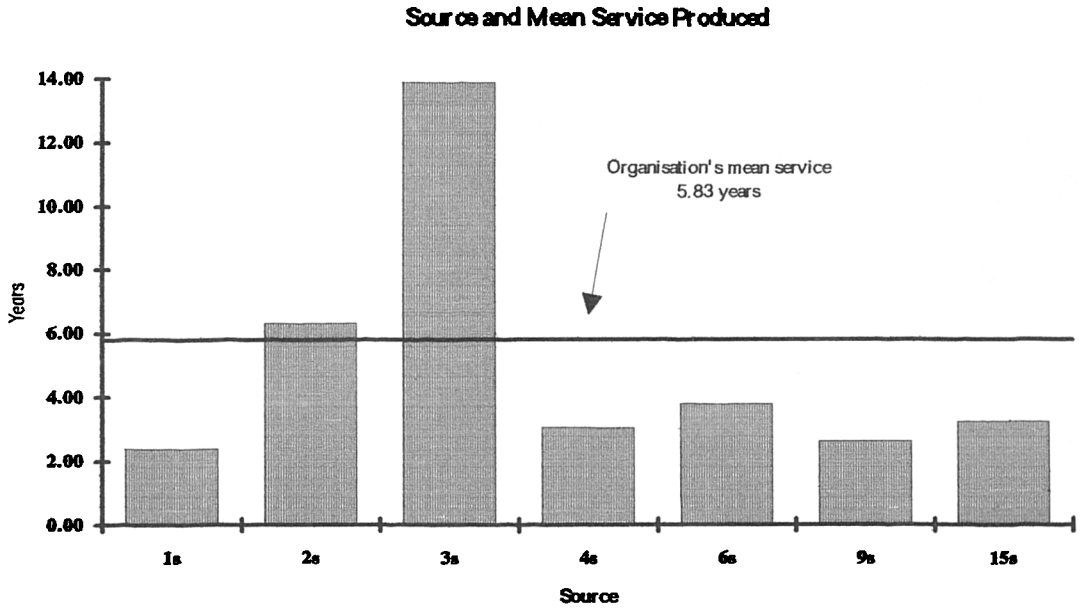

Figure 8.13

Consideration of the variance from the organisation's mean service period (Figure 8.14) shows that source No3. is clearly substantially greater than all other sources. Source No3 giving a mean service period of some 13.87 years, in contrast with the organisation's mean service period of only 5.83 years.

In order to consider the significance of the initial findings and to delve further, Quit Rates for each source were established. The Quit Rates for each of the Sources of

Recruitment utilised during the period 1985 - 1990 (inclusive) are shown in Table 8.4, along with an overall quit rate for the period considered.

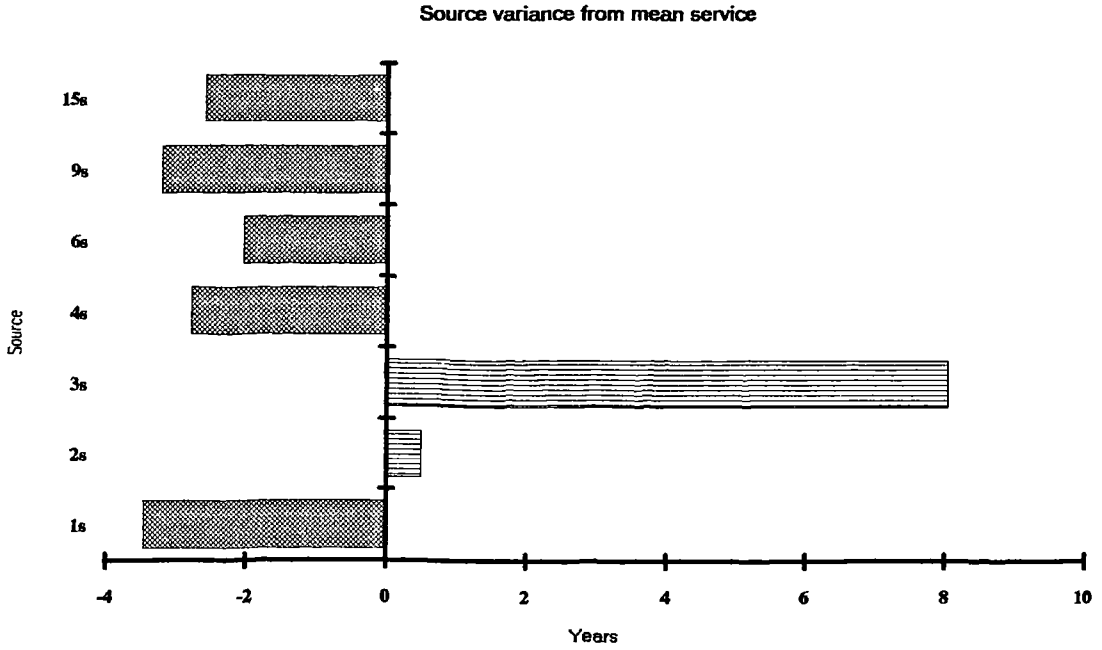

Figure 8.14

The Quit Rate for source No3. is seen to be 50%, which is mitigated by the length of service obtained from the employees who remain with the organisation. The Quit Rates for all sources reduces to only 35% due to the influence of sources No1. and No15., source No1. having a Quit Rate of 30% (for the period considered). The use of source No1. would tend to suggest that employees coming from this source are more stable than employees derived from other sources, even though the actual length of service obtained may be less than that for the 'best performer'.

Source No.	Quit Rate (%) for source	Overall Quit Rate
1	30	
2	50	
3	50	
4	50	
6	50	
9	40	
All sources		35%

Table 8.4 Quit Rates for period 1985 - 1990 number of recruits = 40, quits = 14.

The set of data used in calculating the Quit Rates is applicable for one specific period in the organisation's life, and it may well be that at over a wider timebase then the picture developed would appear significantly different. Management may use the Quit Rate to analyse departments or sections where the turnover of labour is either higher than an acceptable norm, or conversely, lower than a desired level. Those sources which produce significantly divergent Quit Rates are to be avoided, unless the effects are actually desired by management.

The complete set of collected raw data was subjected to processing by means of both a ONE-WAY and a TWO-WAY ANOVA. The ONE-WAY ANOVA seeking to establish the significance of differences in the length of service given by each source within the individual organisation. The TWO-WAY ANOVA being a robust statistical test for the analysis of variance present in a set of data, in this instance the complete set of data for all five organisations. The results from both the ANOVAs are discussed later, with the output from the data processing being shown in Appendices 3, 4, and 5.

8.3 ORGANISATION No2

This organisation is one of the largest Direct Labour Organisations in Scotland, serving the major proportion of its Regional Council's building needs. At the time of the study there were some 2061 weekly paid operatives employed within the organisation. No data was available regarding salaried staff, this being held by a separate division of the Regional Council.

As can be seen from Table 8.5, the organisation utilised eleven (11) discrete Sources of Recruitment, these being sources No: 1, 2, 6, 7, 8,9,10,11,13,14, and 15.

Organisation	**Source of Recruitment** (key to numbers shown below)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No 2	x	x	-	-	-	x	x	x	x	x	x	-	x	x	x

x = used, - = not used.

Table 8.5 Sources of Recruitment Utilised

Key to source numbers.
1 = Local press advertisement, 2 = National press advertisement,6 = Referred by current employee, 7 = Re-employment of an individual, 8 = Referred from school/careers dept., 9 = College/University 'milk-round', 10 = Casual call-in to office/return of application blank, 11 = Training Agency, 13 = Internal sources , 14= Job centre/D of Emplt., 15 = Other/unknown e.g. phone call, letter.

These eleven sources produced the various percentages of total operatives as shown in Figure 8.15. The actual numbers of individuals are as shown in Figure 8.16, and from these figures it can be ascertained that the bulk of total operative recruitment was via four sources i.e. sources No: 8, 10, 13, and 15.

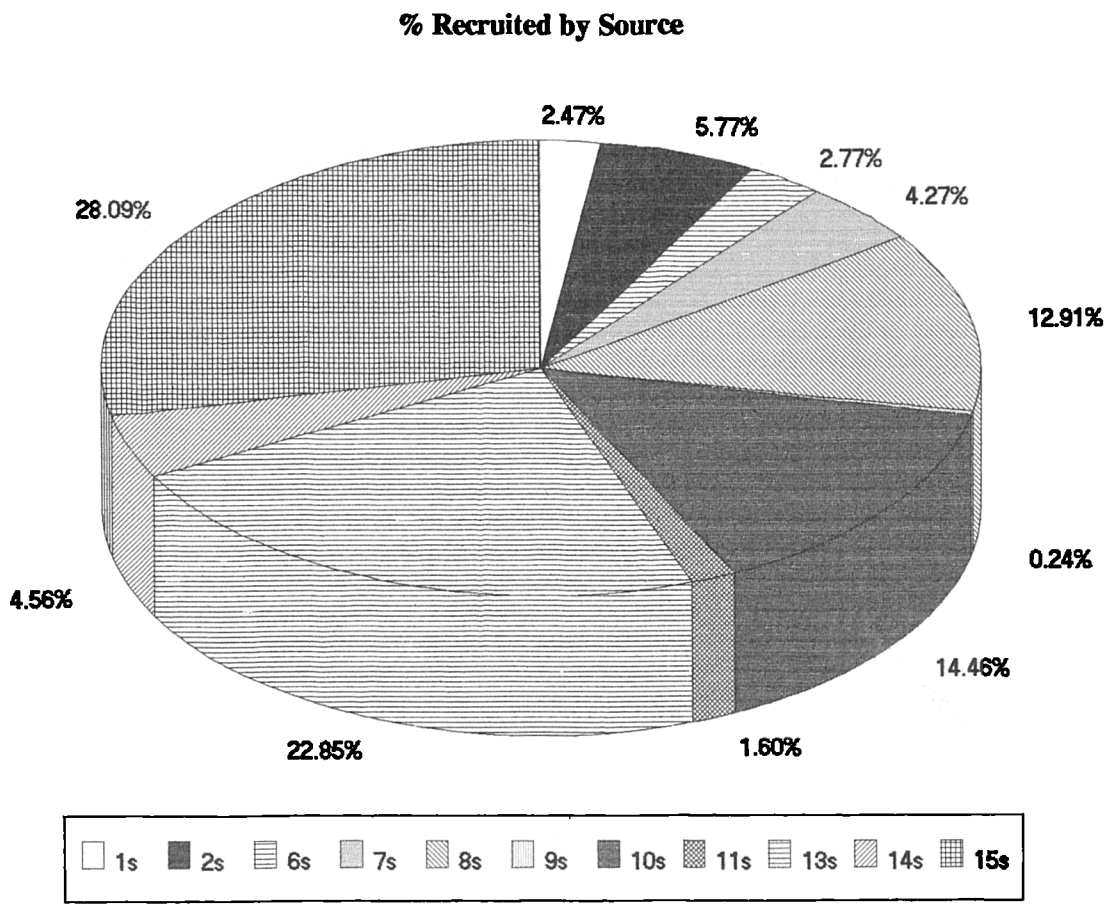

Figure 8.15

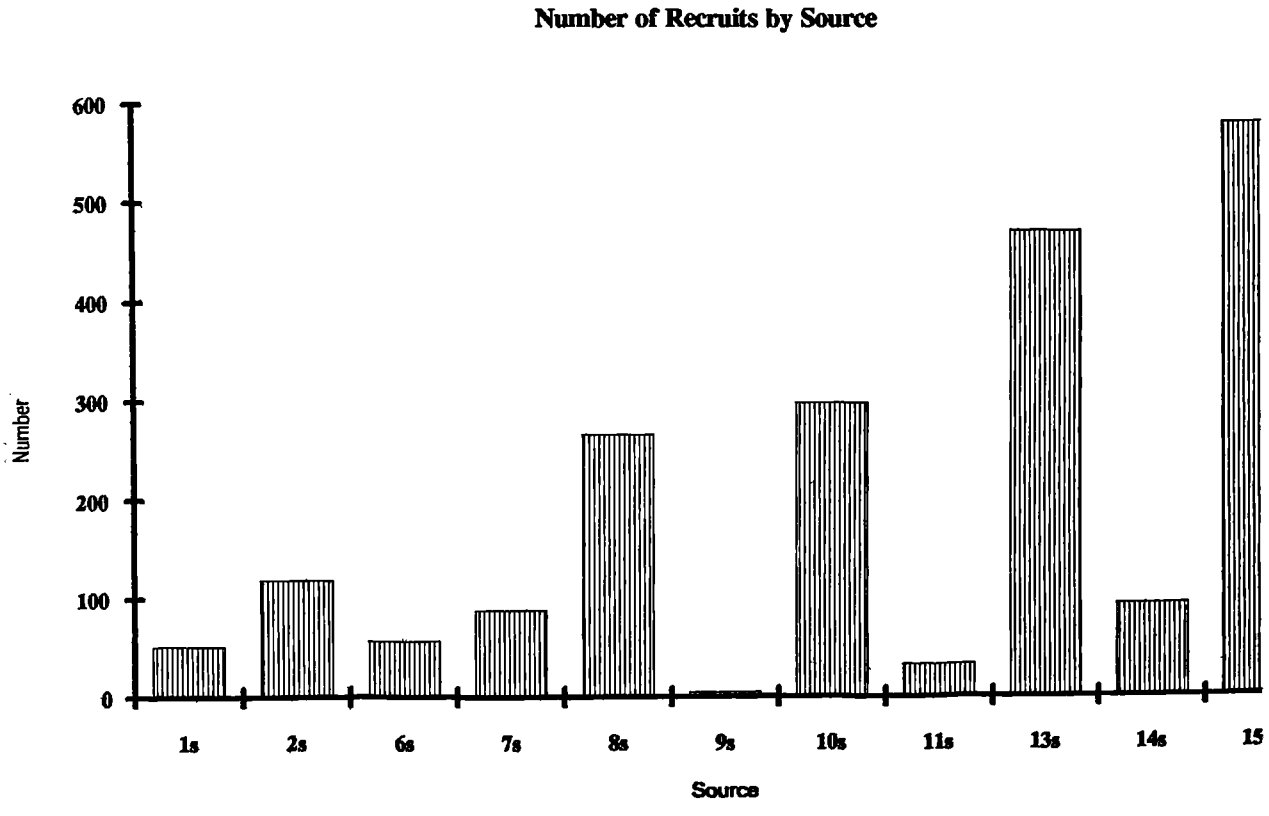

Figure 8.16

Of these four sources, source No15. secured the greater number of operatives. In order to consider the sources further it is useful to assess the age bands recruited by each source, and these age bands are shown in Figure 8.17.

Figure 8.17

Clearly source No15. attracts the majority of its recruits who are in the age range 16 to 25 years. This may be due in some part to the younger age group looking to secure employment with an organisation where they will enjoy some form of long-term job security, especially in their formative training years. Maslow's theory on motivation is particularly applicable when one considers the 'security' need. The other three principal sources also have a high proportion of recruits who fall within the age range 16 to 25 years. Source No9. would clearly be biased towards the younger age bands since it is dealing with individuals who recently have, or are about to, leave school. Source No10. (the casual call in/ application blank) having a high proportion of younger recruits suggests that the younger individuals are quite prepared to take the

initiative on job finding. Rather than wait for a vacancy to become available, they will actively pursue future work.

The sources utilised were fairly consistent in that each had a female cohort, albeit small. Figure 8.18 shows the breakdown of each source in terms of sex.

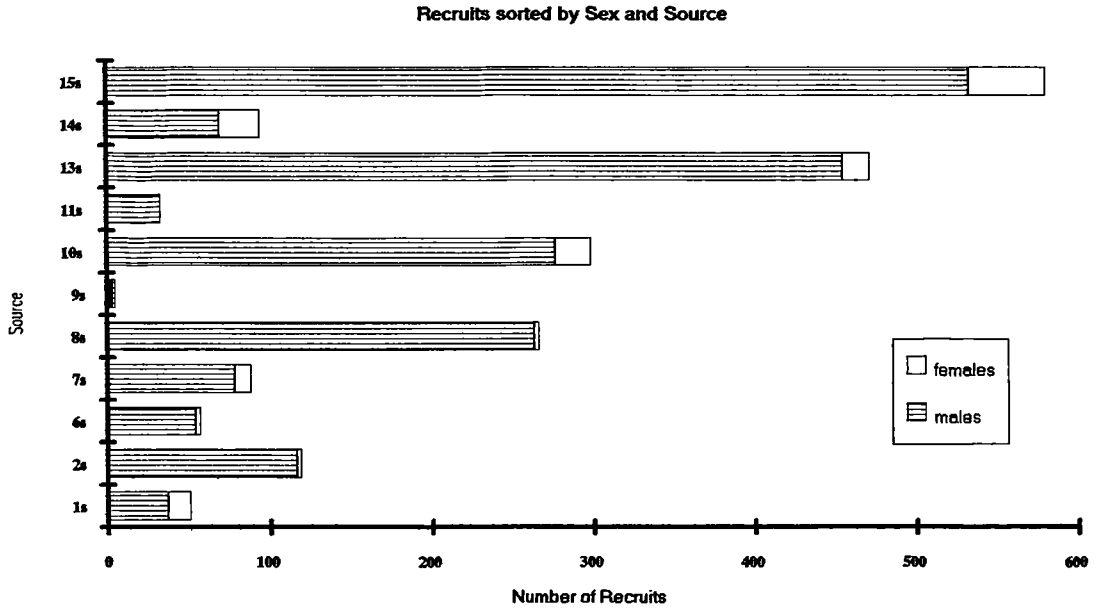

Figure 8.18

The organisation shows a distinct awareness of the potential of females over the age of 35, with a substantial number of its female recruits being well in excess of this age at time of recruitment, as shown in Figure 8.19.

Figure 8.19

The total employee cohort showed a marked bias towards the younger age groups, with some 75.4% being 35 years of age or younger. Clearly a very young workforce. The distribution of ages at recruitment is shown in Figure 8.20.

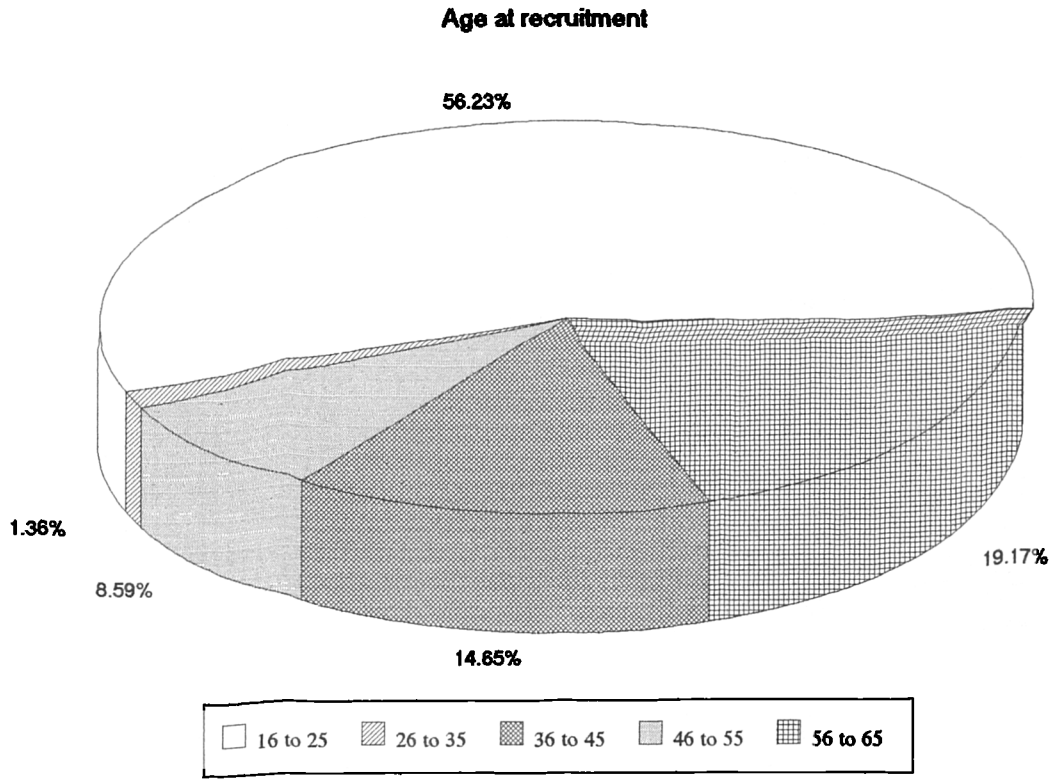

Figure 8.20

In analysing the data on recruitment within this organisation it should be noted that prior to 1974 the organisation existed in a different format. Prior to 1974 the various functions were executed by Burgh and Town Councils, with their amalgamation/rationalisation at Local Government Reorganisation. The Burgh/Town Councils providing much of the feed stock for the new Regional and District Councils. The recruits by source and each year are shown in Figure 8.21 and Figure 8.22 respectively. The recruitment just prior to reorganisation is shown as a grouped value, and subsequent recruitment is shown by the individual sources and years. It can be seen from Figure 8.21 that source No15. has been utilised on a consistent basis throughout the organisations life span. The greatest number of recruits from this source occurring in 1881, when the organisation recruited the greatest total number of employees in any one year.

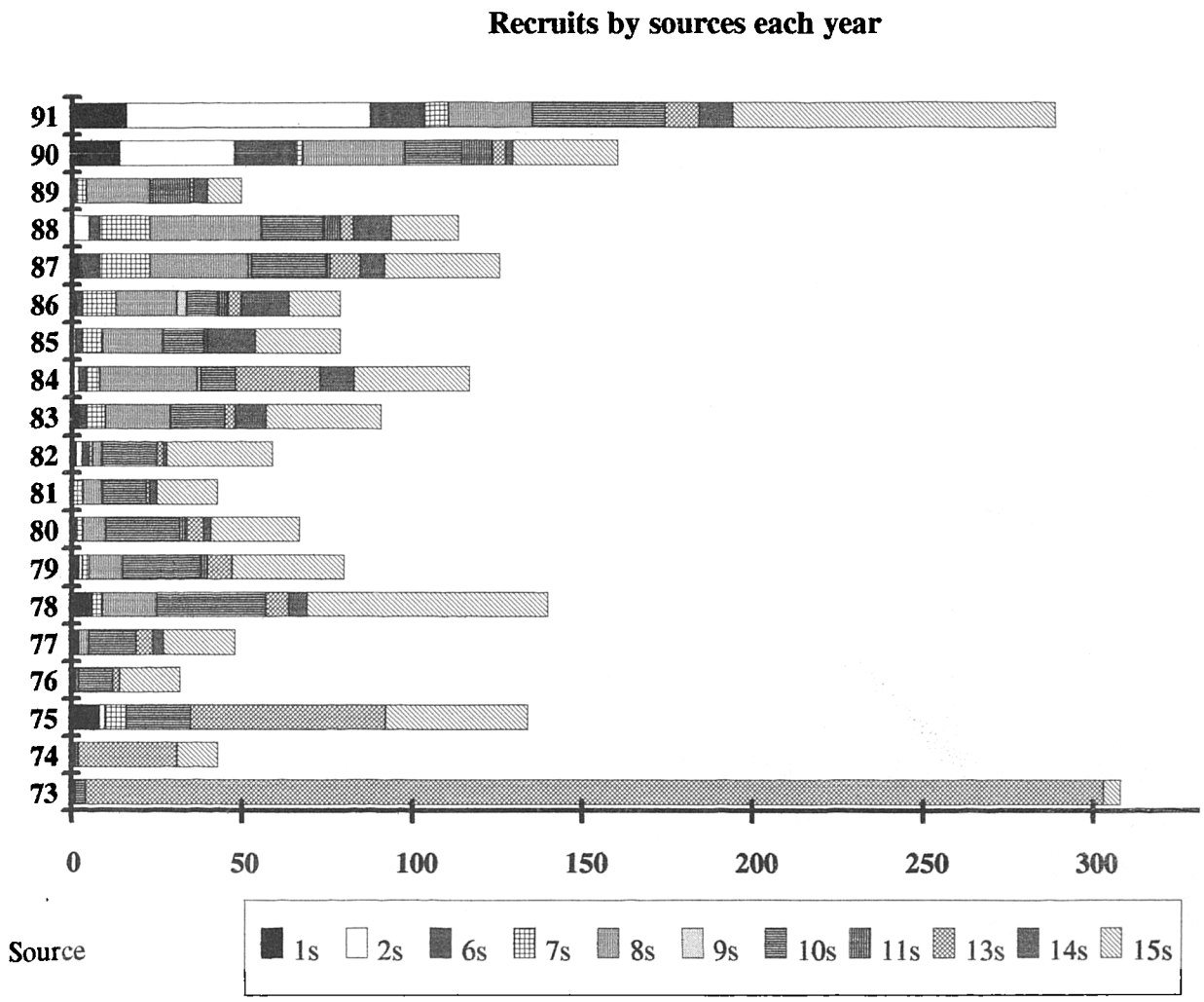

Figure 8.21

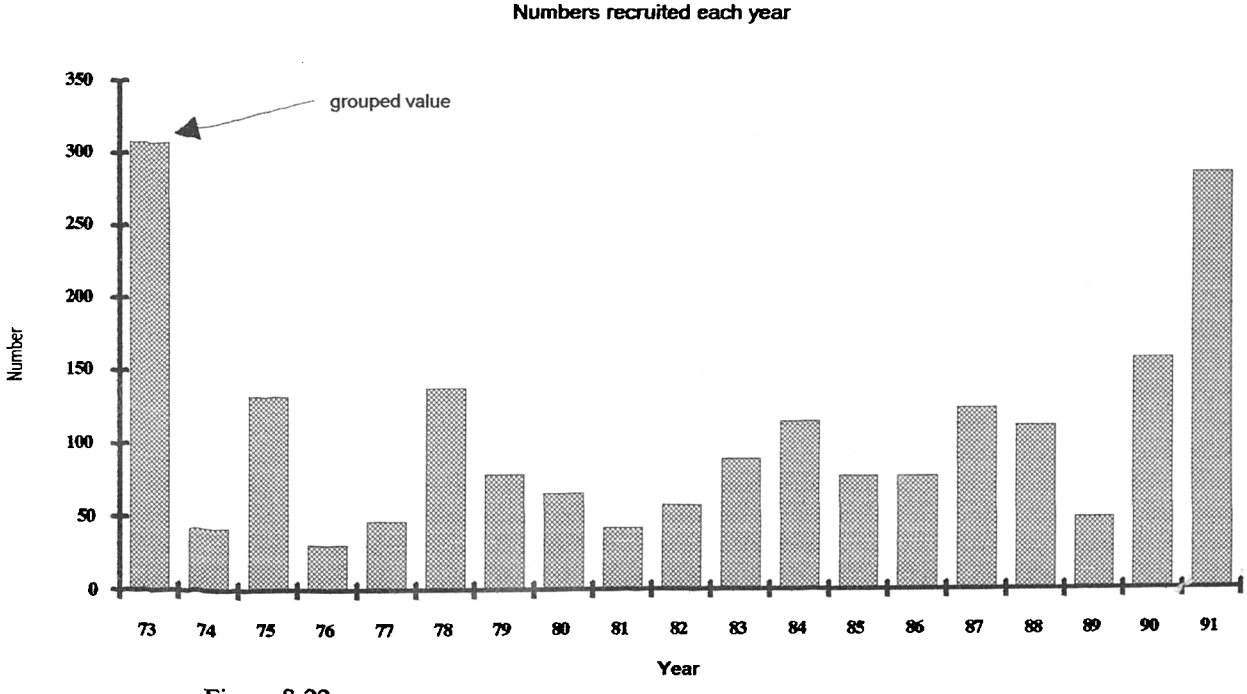

Figure 8.22

From the data it is established that the mean service given by the employees was 7.85 years, with the majority of employees falling into the service bands of: < than 1year, and 1 to 5 years. Figure 8.23 indicates the service bands and the number of employees within each service band, whilst Figure 8.24 indicates the number of employees whose service is above or below the mean service period.

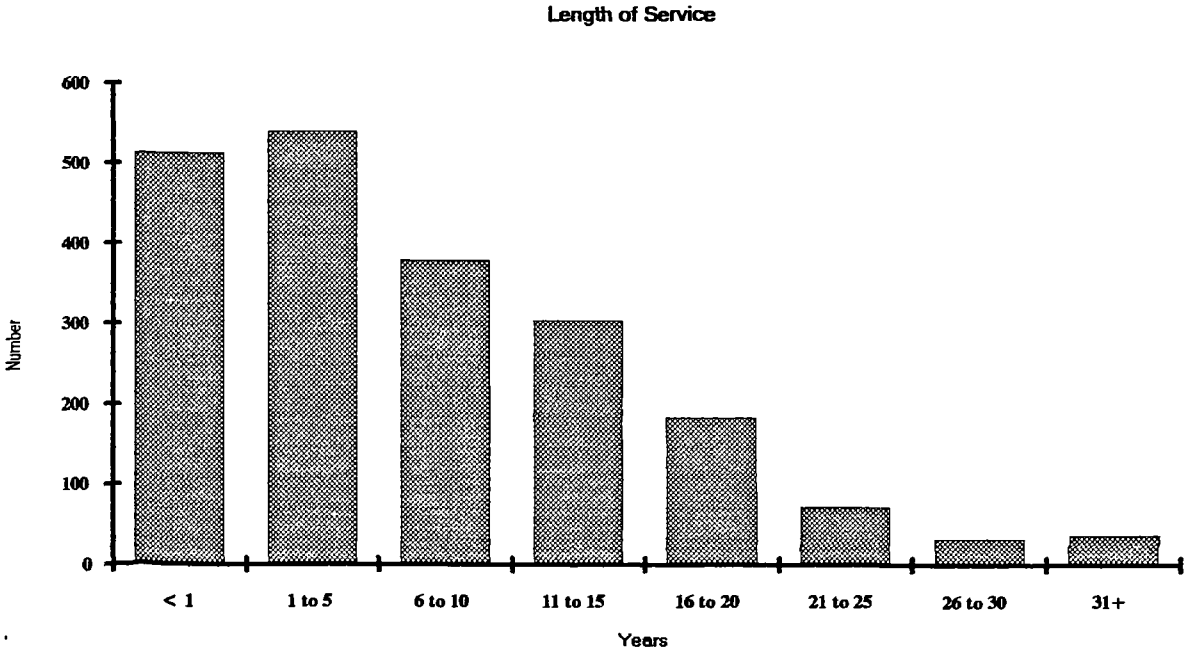

Figure 8.23

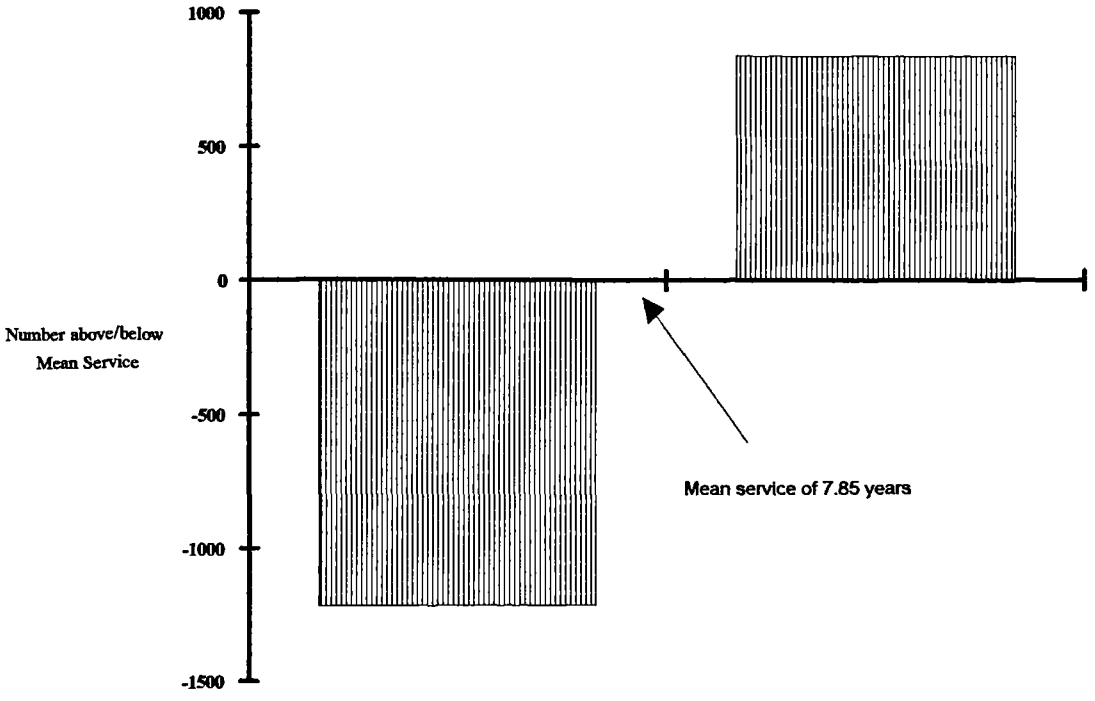

Figure 8.24

Clearly shown in Figure 8.23 is the large number of employees who give a service of less than 1 year. In organisational terms this must prove extremely expensive. The expense arising from several of the heads discussed in Chapter 5. Accession, induction, disruption, training, exit, and subsequent replacement hiring, are all cost areas which must be considered by management of the organisation. Whilst the mean service for the organisation is 7.85 years, it can be ascertained from Figures 8.25 and 8.26 that the majority of both male and female cohorts give a service which falls well below the mean level.

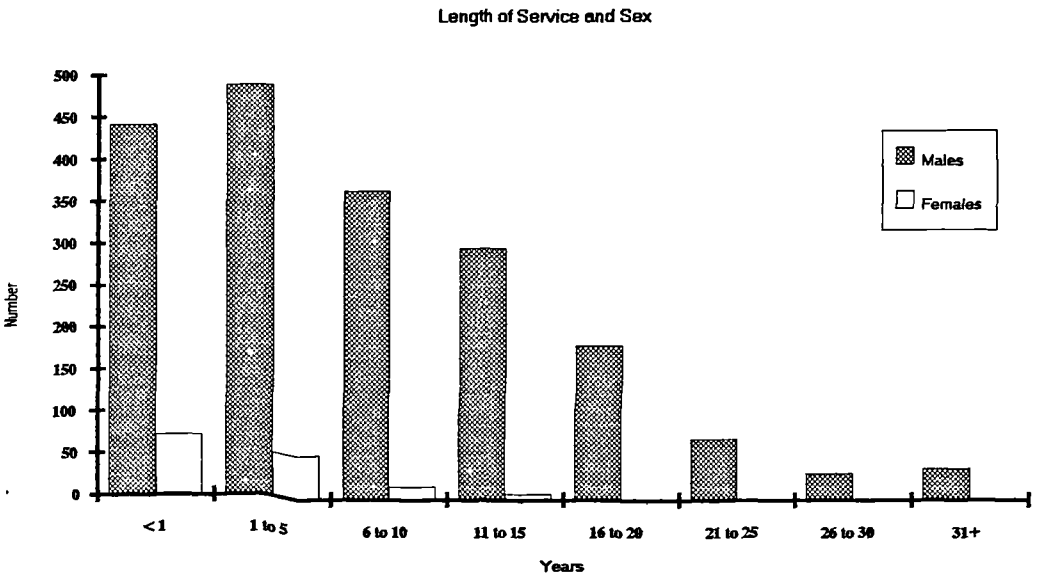

Figure 8.25

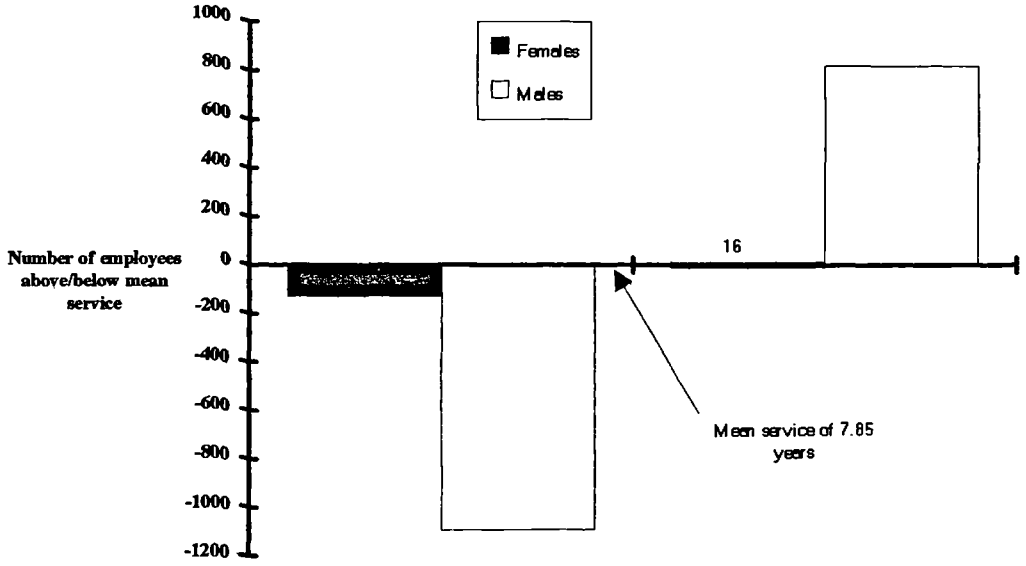

Figure 8.26

When service is related to the Recruitment source utilised it becomes evident that there is again a 'best performer'. Figure 8.27 shows the source of Recruitment and the mean length of service produced by each source. Source No13. clearly provides a substantially longer mean period of service than any of the other sources. The recruitment of candidates via internal sources may well mean that the applicant has received a realistic job preview, since in effect all that is happening is the switch from one operating section within the wider organisation to another operating section. This realistic job preview going some way towards ensuring that the applicant will assimilate into the new operating section with the minimum of disruption and stress, and having worked within another operating section of the wider organisation, perhaps simply see the relocation as part of an ongoing continuous service with the wider organisation. Source No13. is the only Recruitment source which provides a mean length of service greater than the organisation's collective mean value, as can be seen in Figure 8.28. The other Sources of Recruitment falling well below the organisations mean value.

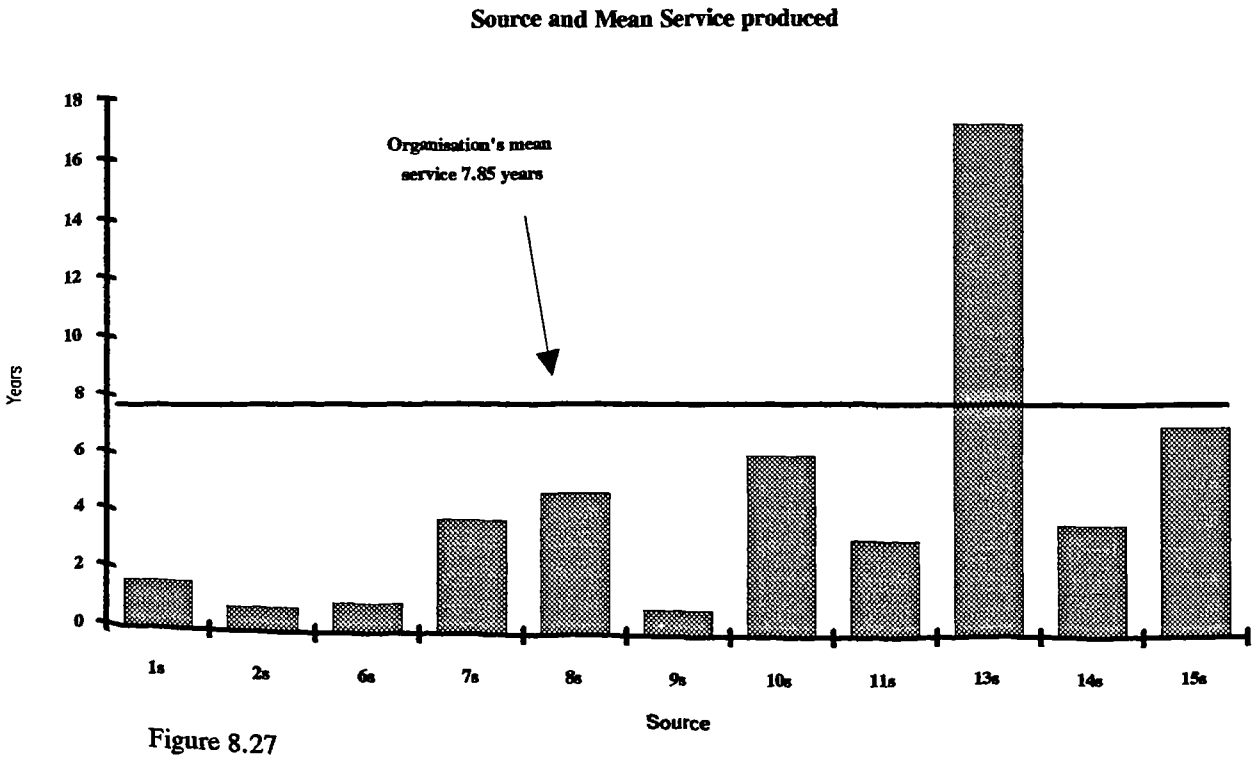

Figure 8.27

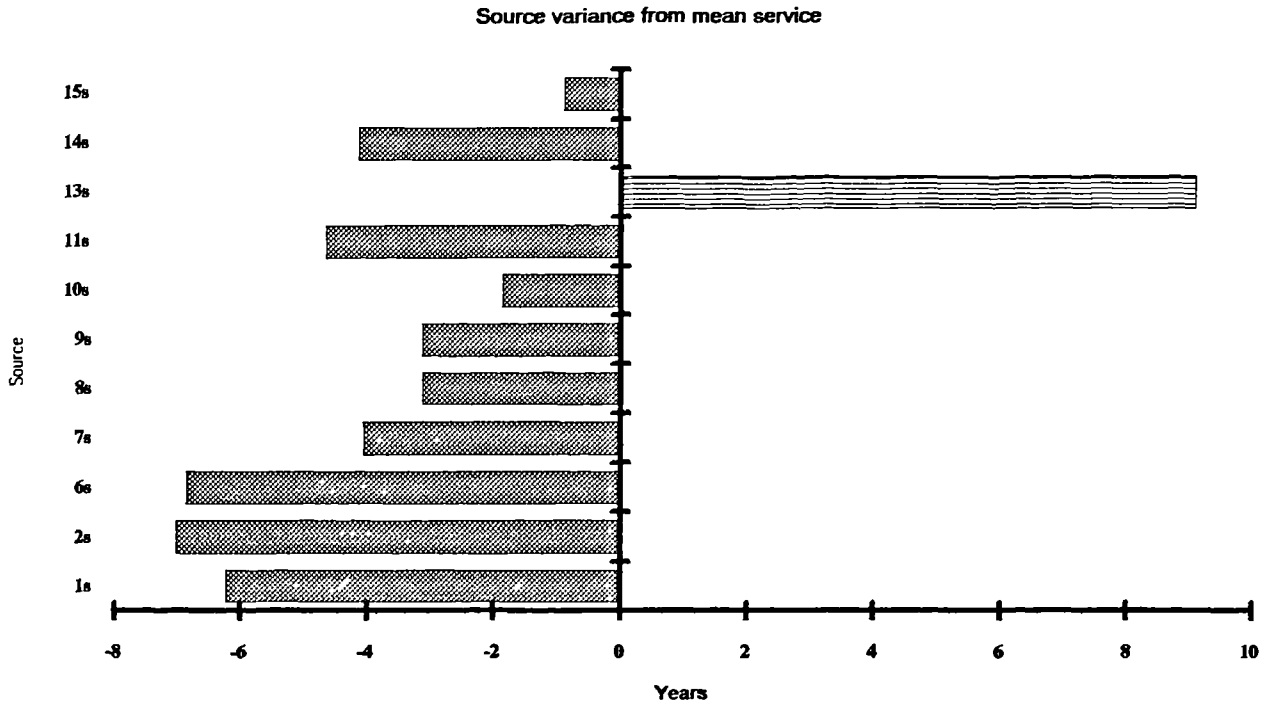

Figure 8.28

The Quit Rates for each of the sources begin to clarify the stability of the various employee groups and these Quit Rates for the period 1984 to 1991 (inclusive) are shown in Table 8.6

Source No.	Quit Rate (%) for source	Overall Quit Rate
1	16	
2	24	
6	34	
7	74	
8	12	
9	100	
10	41	
11	3	
13	8	
14	26	
15	28	
All sources		27.2%

Table 8.6 Quit Rates for Organisation No2 number of recruits = 1065, quits = 280

Sources No7 and 9. stand out immediately, with Quit Rates of 74% and 100% respectively. The remaining sources having rates which are fairly low, thus reducing the overall organisational quit rate to only 27%. Mention must be made of source No11. which stands out in terms of the stability of the recruits coming from any particular source, with a Quit Rate of only 3%. The use of source No11. as opposed to the 'best performer' i.e. in terms of the mean service derived (source No13.), would suggest that the workforce recruited may well be more stable. However care must be taken in the use of this stability value since the number of recruits for each source varies for each year considered in the analysed time period and also due to the fact that the length of service will fluctuate according to the start date of the recruit.

The collected raw data for the whole of organisation two was entered into the ANOVAs in order that further analysis could be undertaken, and the results from these ANOVAs are discussed later.

8.4 ORGANISATION No3

Organisation No3. is a producer of specialised components which are utilised in all buildings. Their principal production facilities are located in Falkirk with ancillary plants in England. Operations commenced in mid 1985 following the management buy-out, from the Receiver, of a division of a one time world renowned manufacturer. At the time of the study, data was made available for only one section of the organisation and within this data there were no salaried staff i.e. all the employees being paid weekly. The study considered the records for 101 employees, the majority of whom were male.

Organisation	**Source of Recruitment**												(key to numbers shown below)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No 3	-	-	-	-	-	x	-	-	-	-	-	-	x	x	x

x = used, - = not used.

Table 8.7 Sources of Recruitment Utilised

Key to source numbers.
6 = Referred by current employee, 13 = Internal sources , 14= Job centre/D of Emplt., 15 = Other/unknown e.g. phone call, letter.

The organisation utilised four (4) discrete Sources of Recruitment when recruiting their employees. These sources are as shown in Table 8.7, and are sources No: 6, 13, 14, and 15. From these four sources the organisation recruited the various percentages of the total employee mass as shown in Figure 8.29. The actual numeric values are given in Figure 8.30, and from these figures source No15. is evidently the source whereby the greater percentage of employees are recruited.

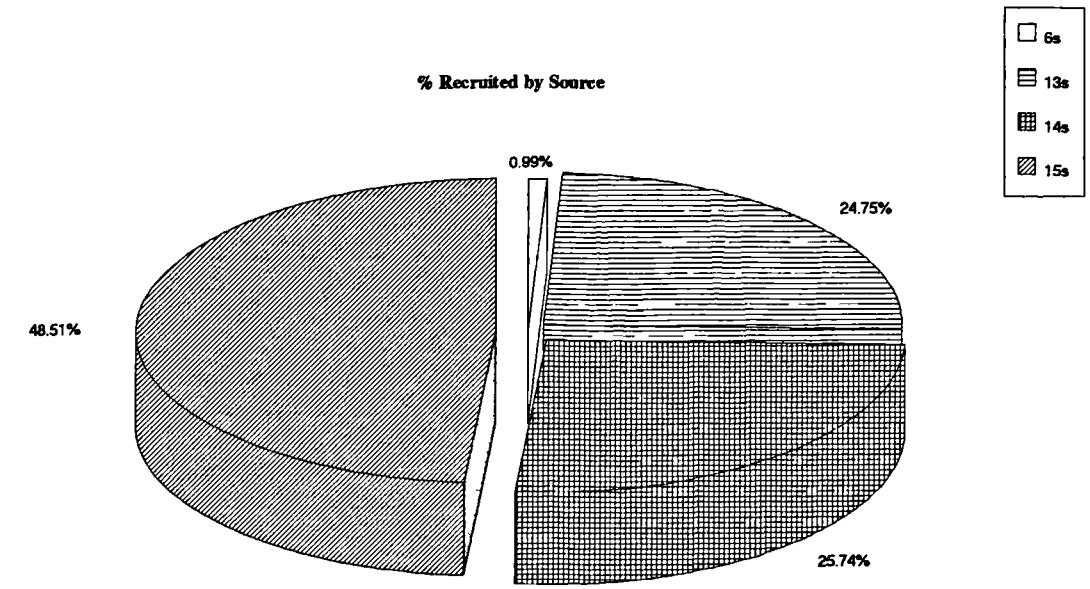

Figure 8.29

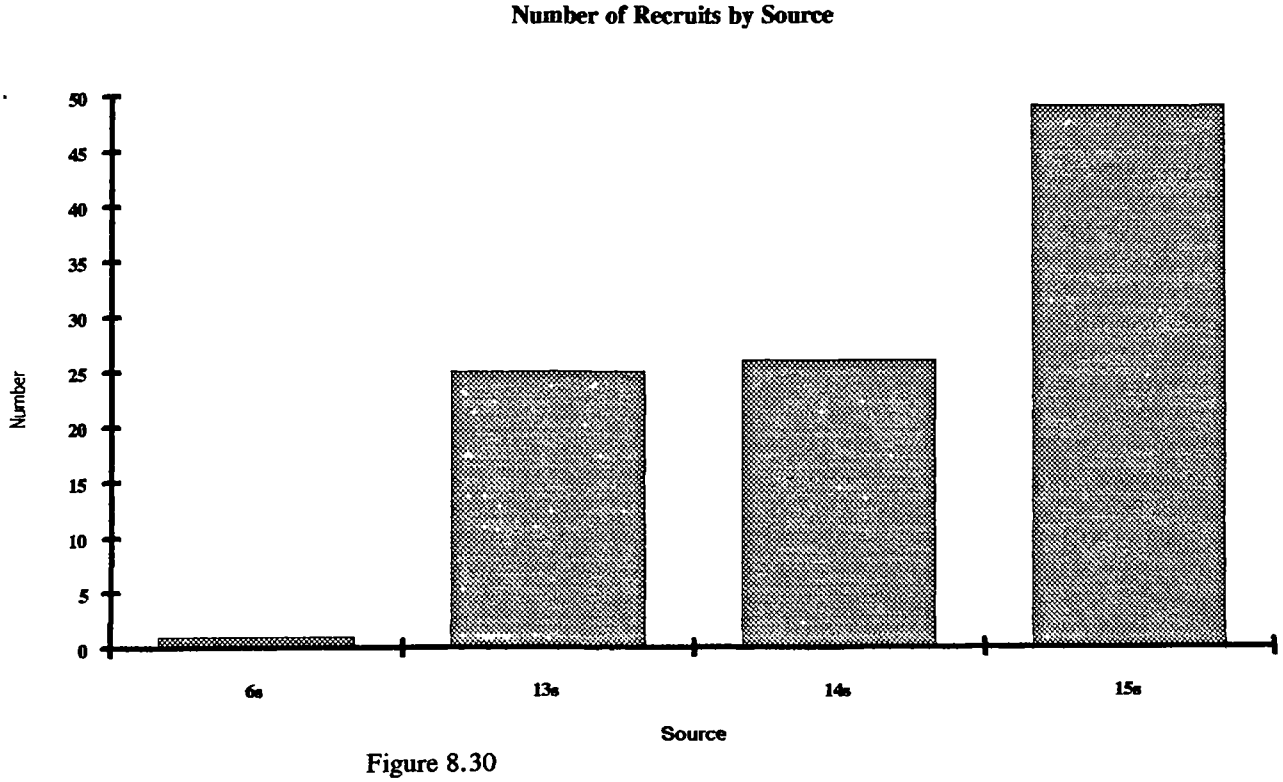

Figure 8.30

The age ranges for the employees, shown in Figure 8.31, indicates that of the Sources of Recruitment utilised the majority of sources tended to secure employees who were in the age range 16 to 25 years. Only source No14. produced a major proportion of

its recruits in the age range 26 to 35 years. This age range would be consistent with those made unemployed or seeking new horizons. The Job Centre perhaps being perceived as a primary source of their vacancy information, indeed if the applicant is unemployed it may well be that the Job Centre has directed them towards the vacancy. Source No15. shows a pronounced swing towards the younger applicant and this may be linked to the type of work carried out within the organisation i.e. predominantly manual, non or semi-skilled tasks. Therefore individuals with little or no qualifications, apart from youthfulness and physical fitness, would find any vacancy appealing (always provided sufficient motivational stimuli are present in terms of financial or other rewards), and would actively seek out such vacancies on their own volition.

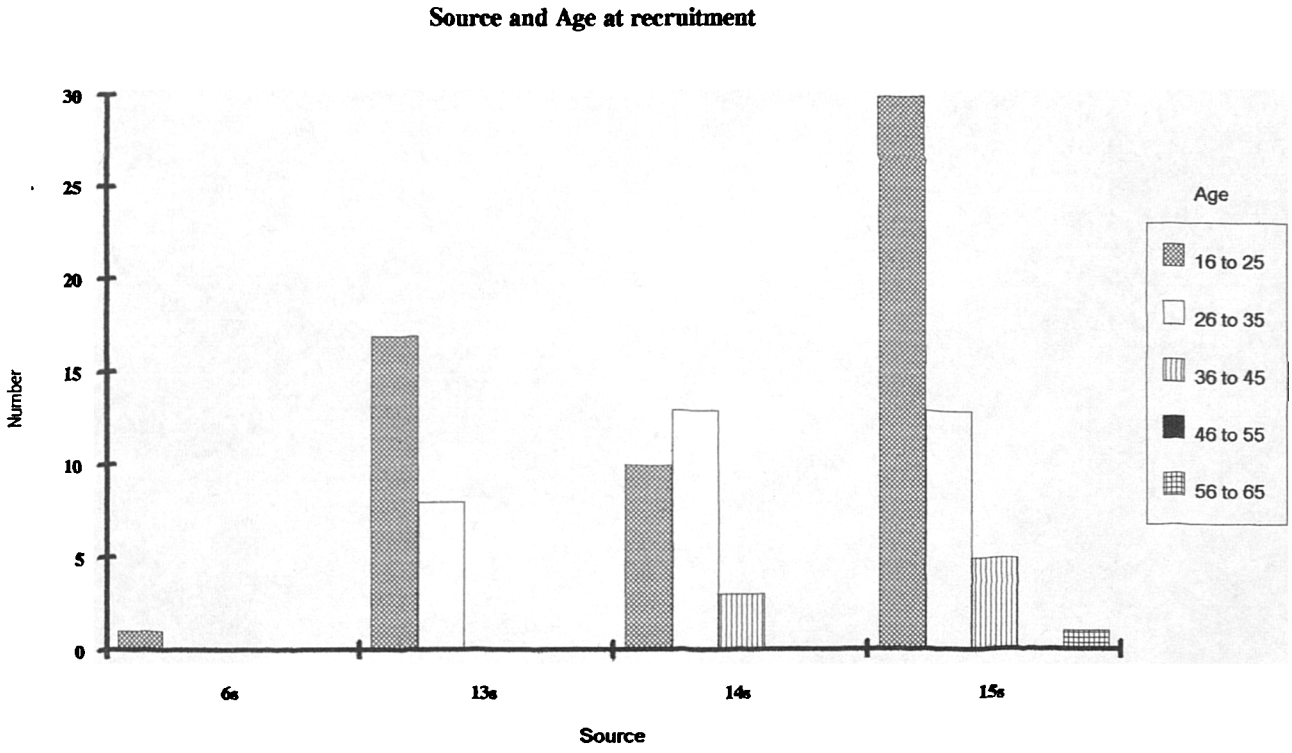

Figure 8.31

Figure 8.32 indicates that the organisation's female cohort are drawn from all sources except No6., with the distribution of female recruitment being fairly evenly spread over the remaining Sources of Recruitment utilised.

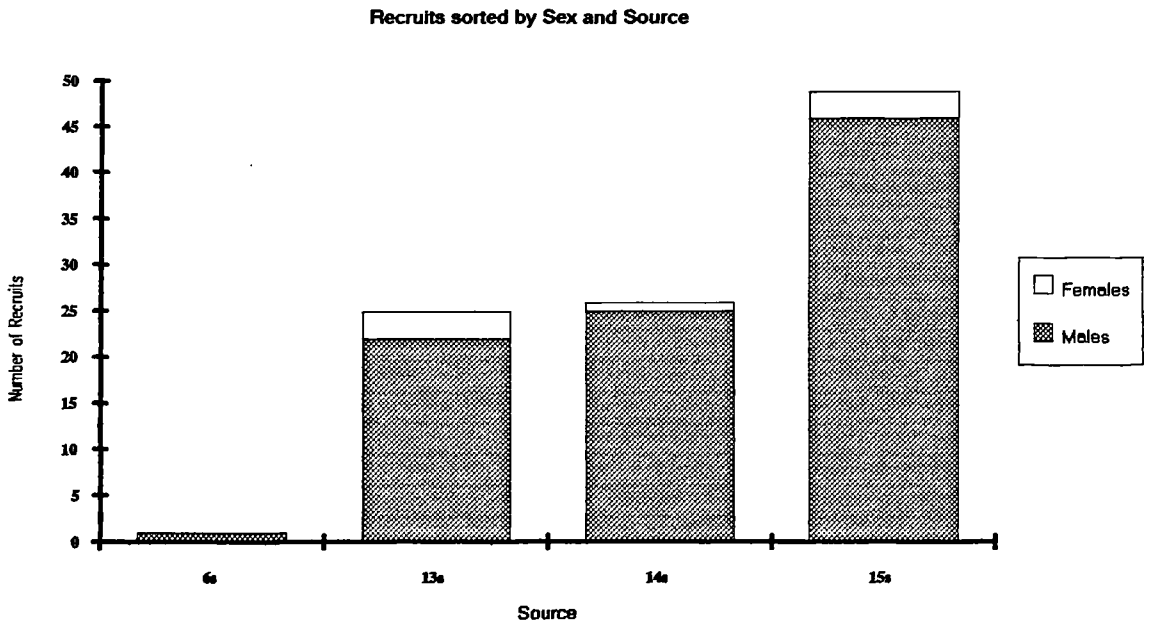

Figure 8.32

The organisation's workforce is youthful, in that 54.26% of all employees recruited were within the age range 16 to 25 years. The females recruited were exclusively within this age range, as shown in Figures 8.33 and 8.34.

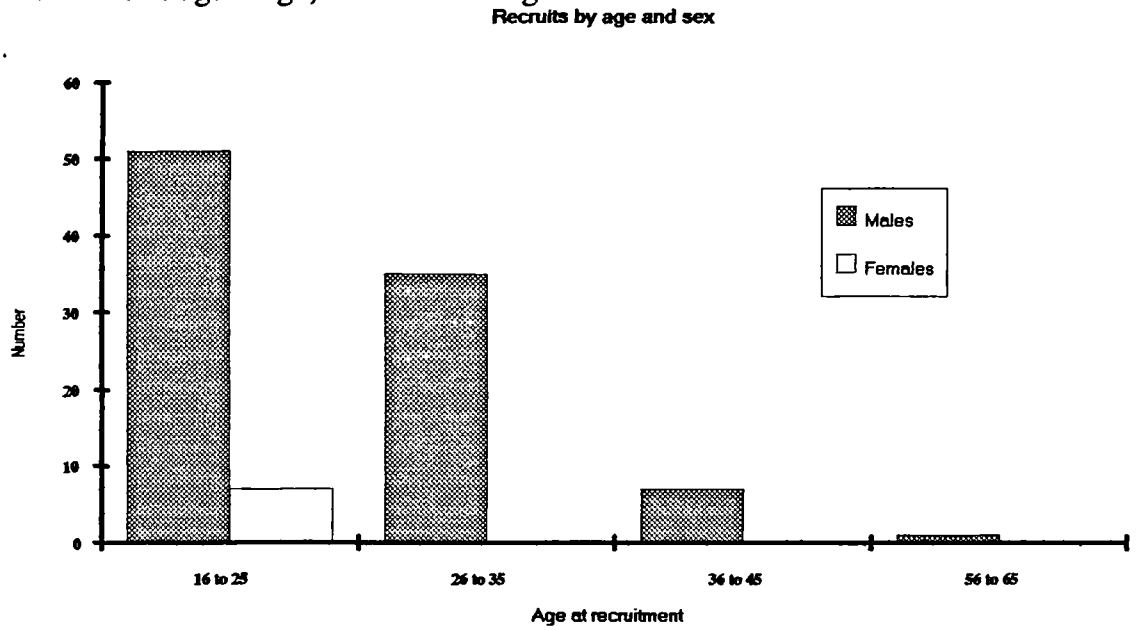

Figure 8.33

Analysis of the sources utilised each year shows that source No15. consistently produced the greater proportion of employees, with the peak recruitment occurring in 1988. The organisation clearly relying on the applicant to be the active job seeker rather than the organisation going out into the market place to track down potential recruits. Figures 8.35 and 8.36 illustrate the recruits secured by each source on an annual basis and also the numbers recruited each year.

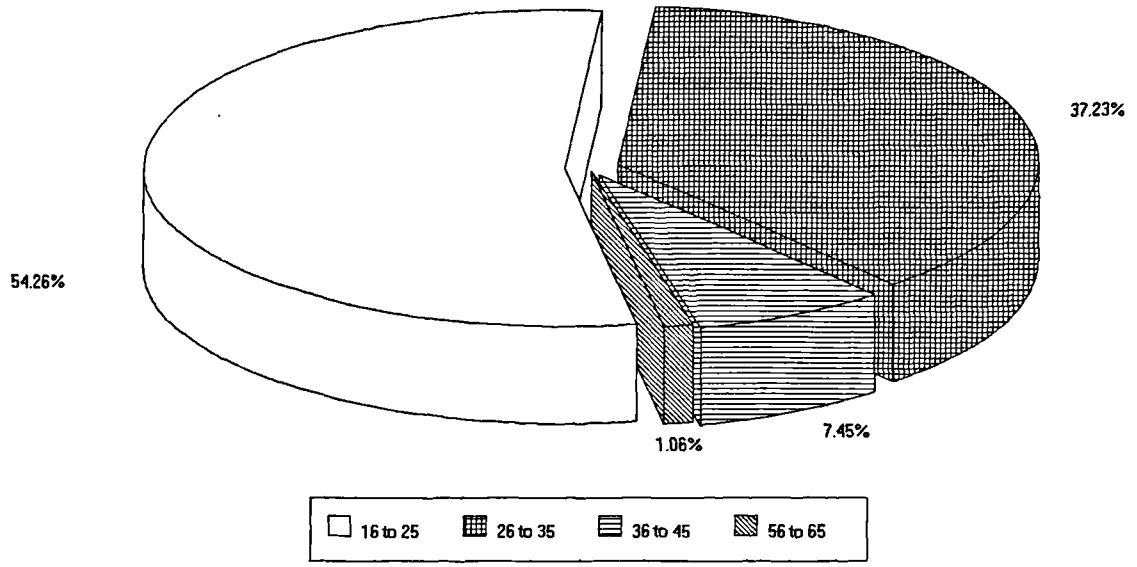

Figure 8.34

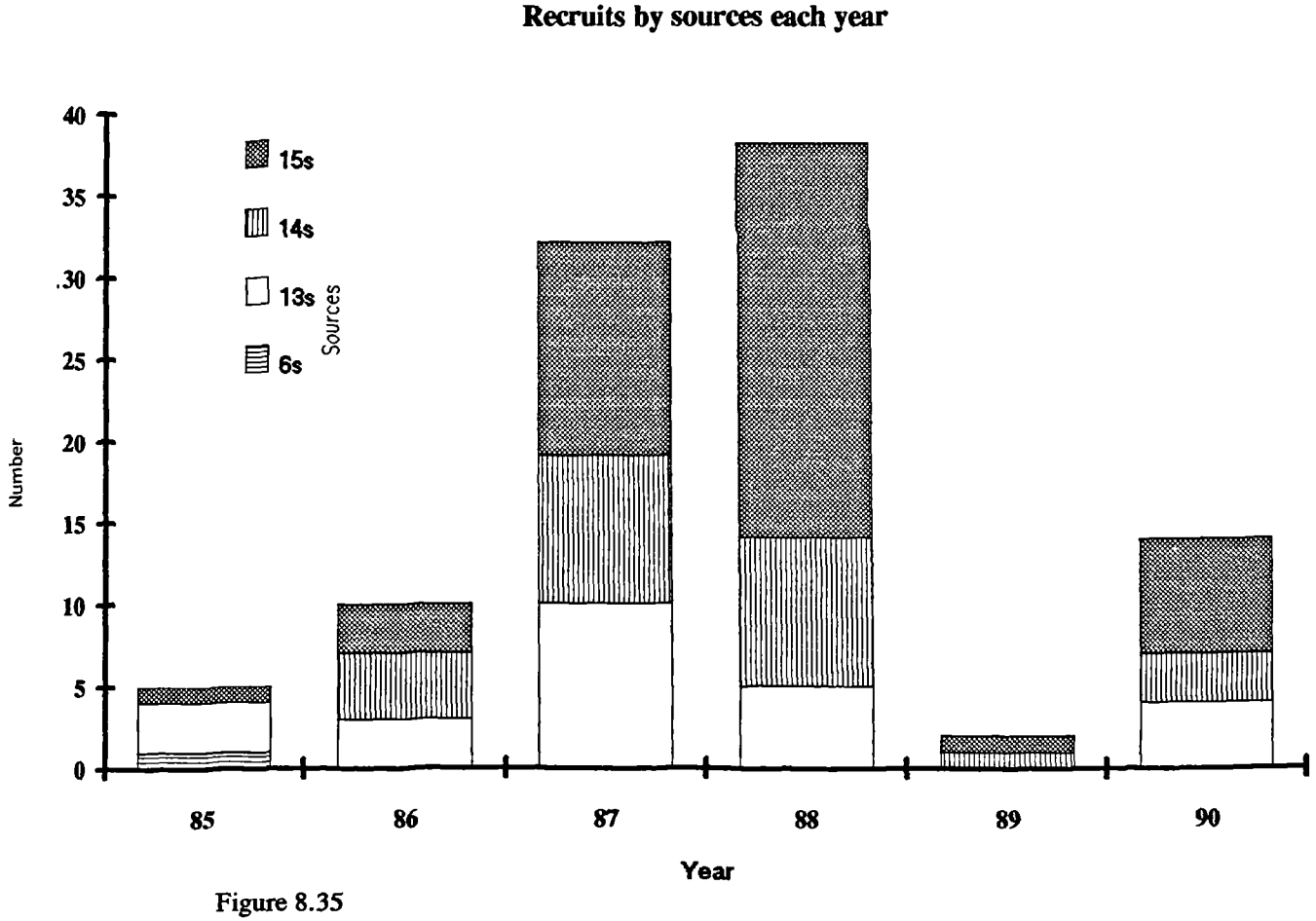

Figure 8.35

Consideration of the total employee cohort shows that the organisation secured a mean length of service of 1.61 years. Figures 8.37 and 8.38 illustrate the length of service (and split amongst sexes) and the numbers of employees whose service exceeds or falls below the mean service level. Both males and females tending to produce service periods in excess of one year, although there are substantial numbers in both sex groups who produce periods of service which are less than one year.

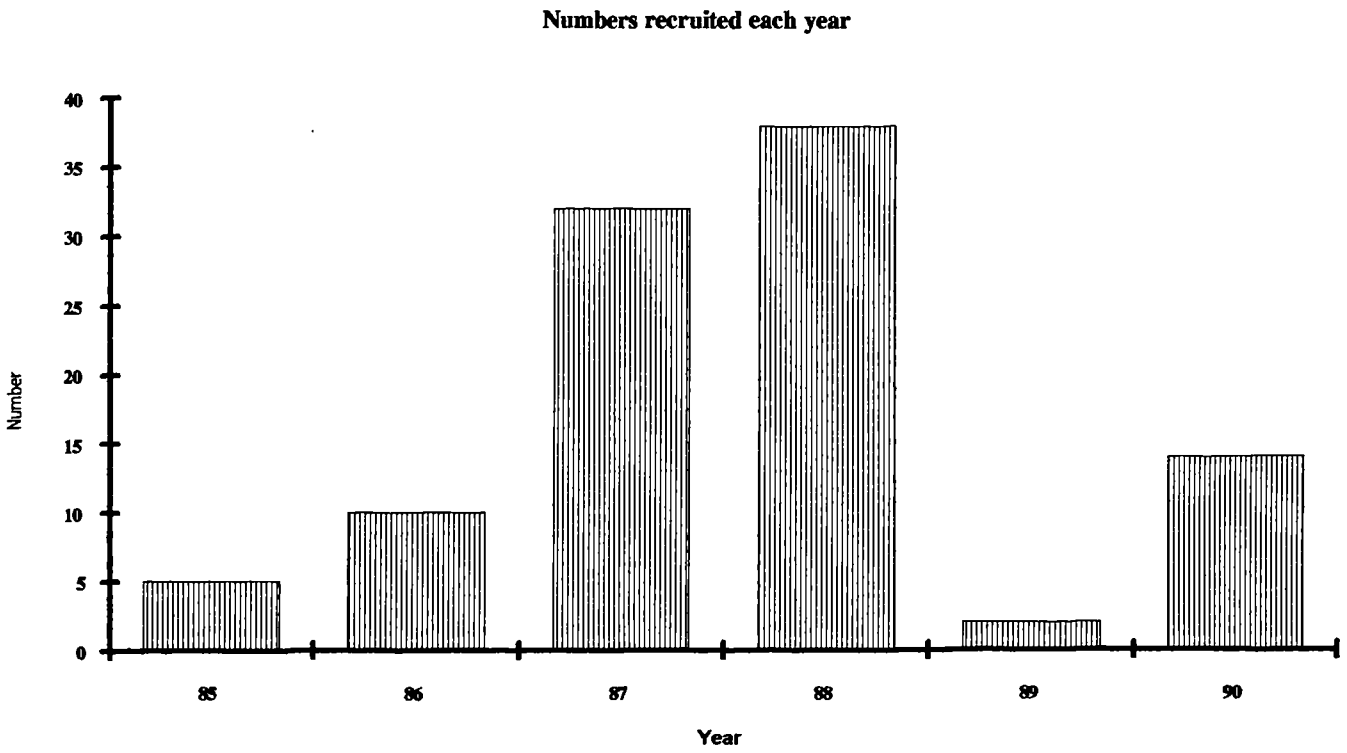

Figure 8.36

Figure 8.37

Analysis of the Recruitment source with relation to the length of service produced shows that the 'best performer' was sources No6., with source No13. also producing a mean length of service which exceeded the organisation's mean service period. This analysis is shown in Figures 8.39, with Figure 8.40 indicating the variance of each source from the organisation's mean service period.

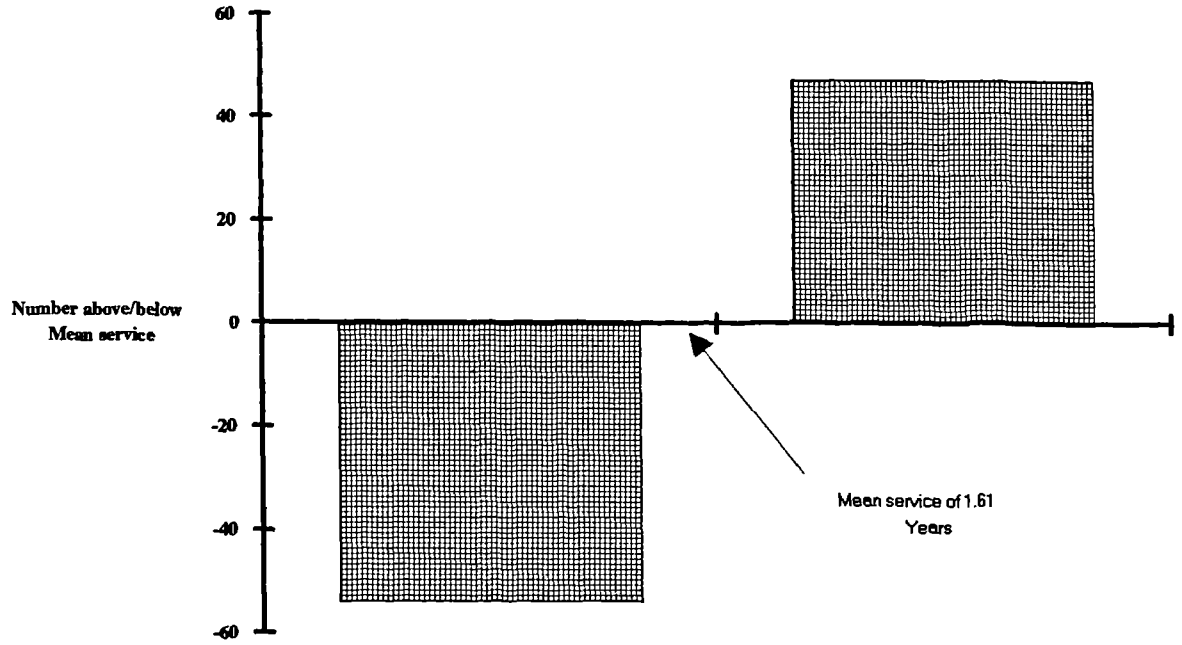

Figure 8.38

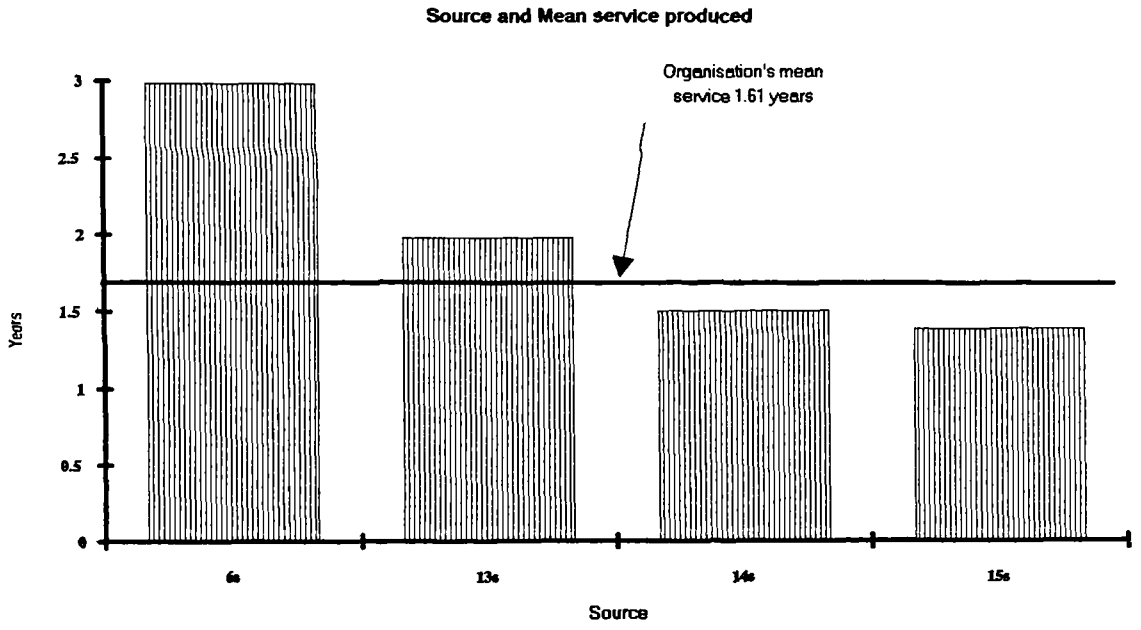

Figure 8.39

The other two Sources of Recruitment gave mean lengths of service which fell below the organisational mean value. Clearly then source No6. appears to be the source which should be utilised by this organisation when seeking to secure as long an employee tenure as possible. Several reasons may underpin the success of this source in securing longer serving employees; it may be that realistic job previews are being given by the existing employee to the potential recruit, it may also hold that the existing employee is able to spark motivational thresholds the applicant holds as being

triggers e.g. by informing of pay levels which are above the norm, or describing how bonus may be readily earned or the potential for earning bonus, or working conditions which are exemplary, it may be that the existing employee is able to provide news of vacancies faster than other sources and this secures the applicants commitment, or it may simply be that the new recruit feels some form of loyalty or owes a debt of gratitude to the existing employee.

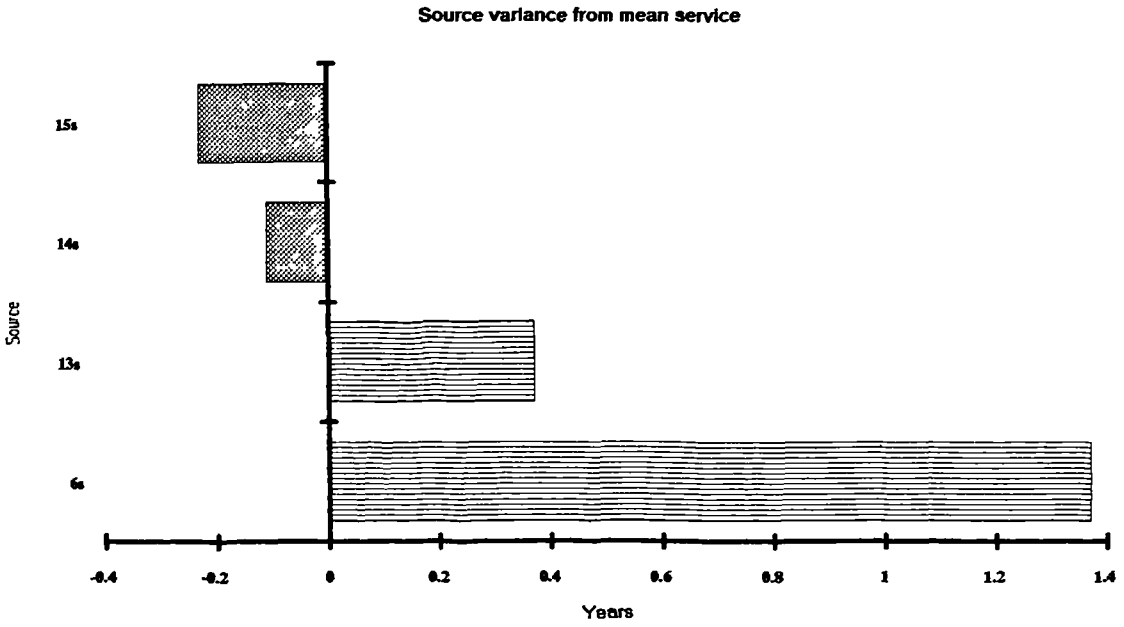

Figure 8.40

Quit Rates for each of the sources were established and are as shown in Table 8.8. The period covered in the Quit Rate analysis covers the life-span of the organisation from buy-out in 1985, until 1990.

Source No.	Quit Rate for source	Overall Quit Rate
6	100	
13	52	
14	65	
15	55	
All sources		57%

Table 8.8 Quit Rates for Organisation No3. number of recruits = 101, quits = 58

Whilst source No6. produced the longest mean service it also produced the greatest turnover rate of 100%. Source No13. produced the lowest turnover rate and was second to source No6. in terms of mean length of service produced. The overall organisational turnover rate of 57% must give management grave cause for concern, unless of course the high turnover rate reflects many of the positive effects of turnover (as discussed in Chapter 5), and these positive effects are actively desired by management. The introduction of 'fresh faces' on a regular basis may well serve the organisation positively in that the new recruits come in with enthusiasm and a willingness to work at reasonable output levels. The production levels achieved may diminish as the routineness and monotony of the work begins to wear them down. A second positive view of the high turnover is the constant stream of new recruits who may be moulded into the organisation's methods and work practices, thus enabling the constructive, or otherwise, removal of those who are perceived as no longer worth retaining.

Again it may be that the period considered is insufficient to allow the fuller picture to develop within the organisation and only further data collection and analysis would allow this current view of the Quit Rates to metamorphose, giving the wider view of the organisation's true or underlying Quit Rates..

In order to establish the significance of the mean service levels produced the complete set of organisation No3's data was entered into the ANOVAS for further processing, and the results from the ANOVAS are discussed later.

8.5 ORGANISATION No4

This organisation are, at the time of the study, the largest practice of Surveyors in Scotland. The head office is located in Edinburgh, with regional branch offices throughout Scotland. At the time of the data collection there was a total staff complement of 178 individuals, with the majority being males. The personnel records of this organisation were perhaps the poorest in terms of regular updating and completeness. Accordingly data was not available for all years of the organisation's existence, but those years for which data was available have been included in the research.

Organisation	Source of Recruitment (key to numbers shown below)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No 4	x	x	x	x	-	x	x	-	x	x	x	x	x	-	x

x = used, - = not used.

Table 8.9 Sources of Recruitment Utilised

Key to source numbers.
1 = Local press advertisement, 2 = National press advertisement, 3 = Trade or business journal advertisement, 4 = Recruitment agency, 6 = Referred by current employee, 7 = Re-employment of an individual, 9 = College/University 'milk-round', 10 = Casual call-in to office/return of application blank, 11 = Training Agency, 12 = Head hunted, 13 = Internal sources , 15 = Other/unknown e.g. phone call, letter.

The organisation utilised twelve (12) Sources of Recruitment when seeking to recruit staff, these sources are as shown in Table 8.9, and are sources No.: 1, 2, 3, 4, 6, 7, 9, 10, 11, 12, 13, and 15. Within these twelve sources the organisation recruited the various percentages of the total staff cohort as shown in Figure 8.41. The numerical values of each of these component percentages are as shown in Figure 8.42, and from these values it can be observed that the organisation secured the majority of its staff by means of source No1. (Local Press advertisements).

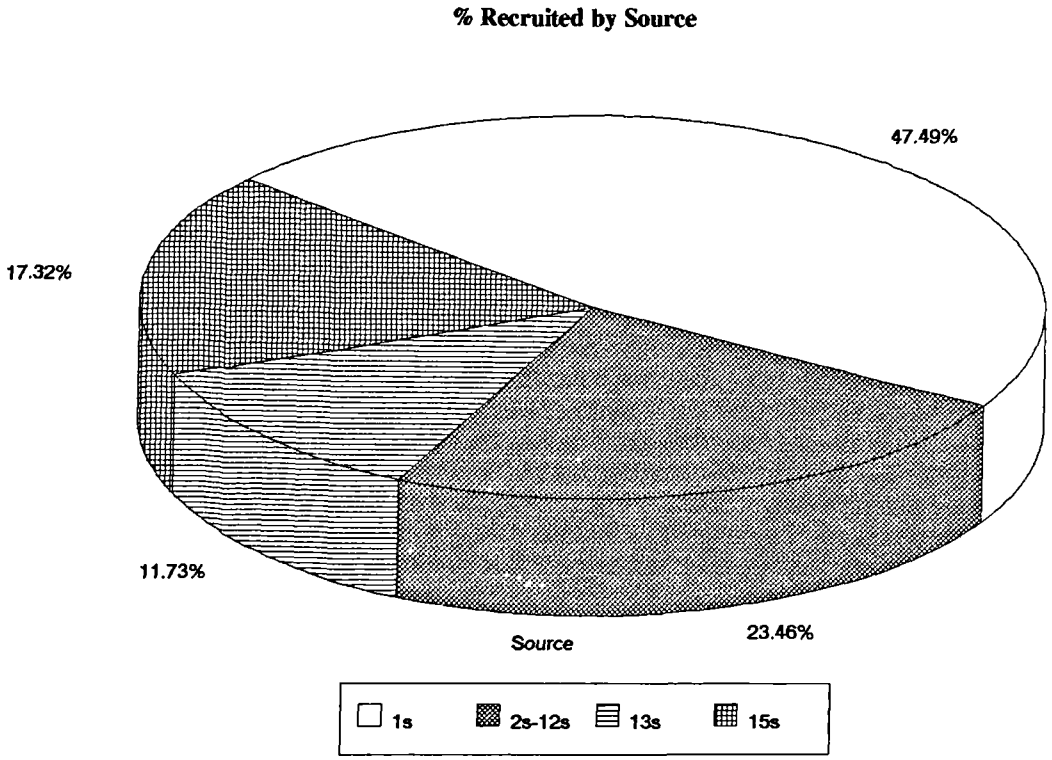

Figure 8.41

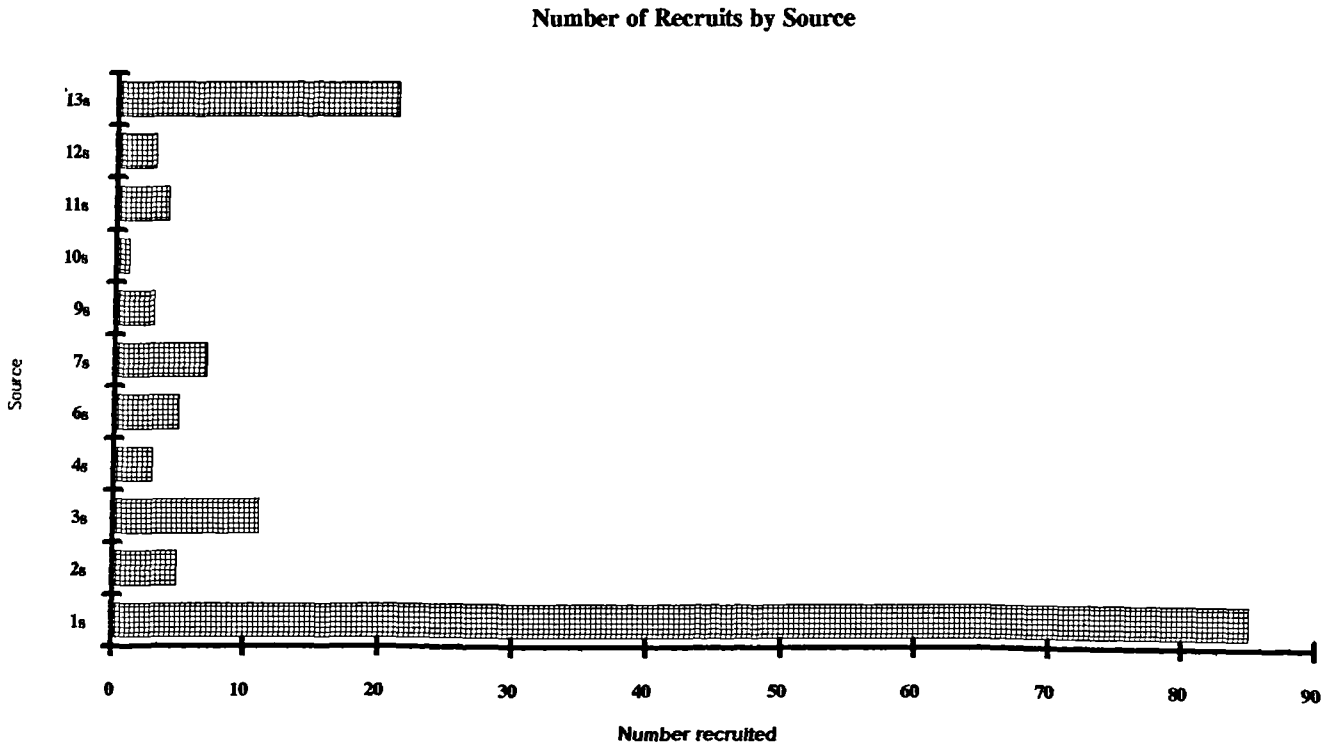

Figure 8.42

Whilst the organisation operates on a national basis the recruitment of staff is founded on source No1., with the use of the other eleven sources to supplement the staff recruited by source No1. The number of recruits secured by the other eleven sources

suggests that there is no clear cut internal policy regarding sourcing recruits via these other Sources of Recruitment other than the use of each source as and when a vacancy occurs.

The age ranges of the organisation recruits are from the 16 to 25 bracket, all the way up to those in the 65+ age range. The nature of the organisation itself and the work it undertakes modifying the acceptable recruitment age ranges within its staff structure i.e. senior citizens recruited and employed as Consultants. Figure 8.43 illustrates the age ranges of the various recruits and the appropriate source of Recruitment utilised in their recruitment. The organisation shows a bias towards the lower age ranges at recruitment but still none the less accepts those who are maturing.

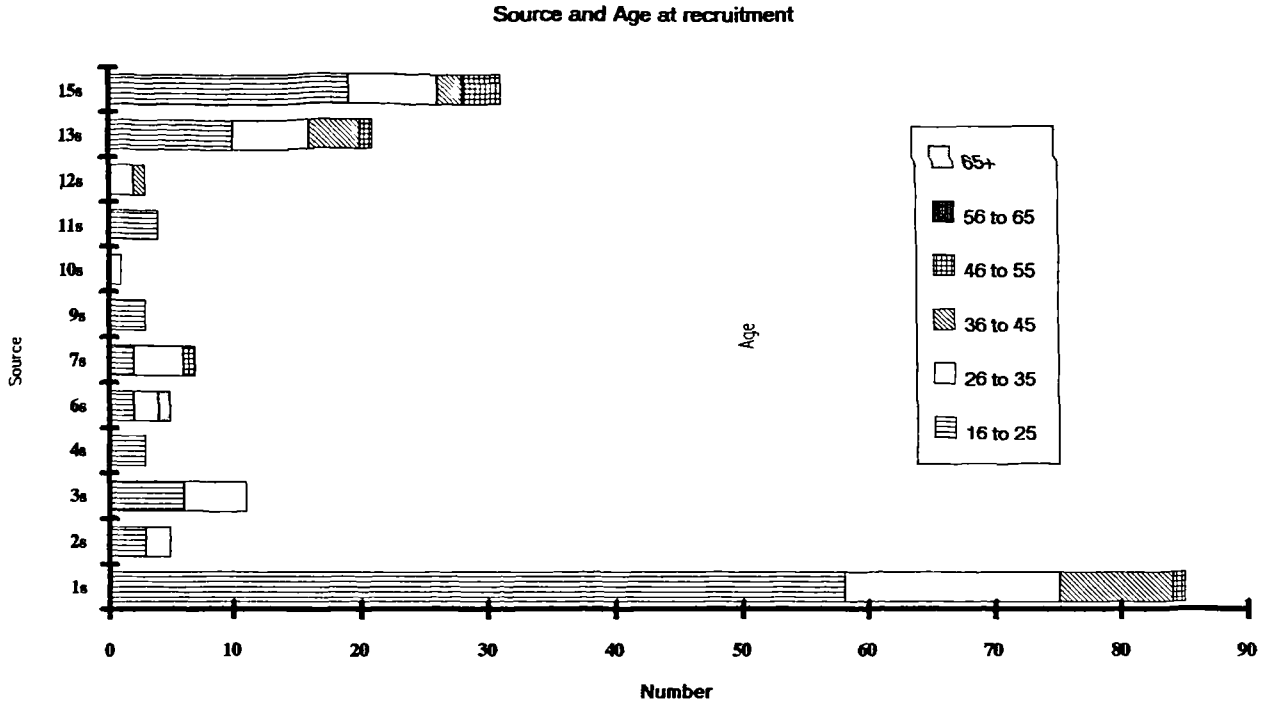

Figure 8.43

The distribution of males and females within the organisation are shown in Figure 8.44, along with the various Sources of Recruitment utilised to secure each male or female member of staff. As can be seen from Figure 8.44, the majority of the female members of staff were recruited via source No1. with small numbers being added to their cohort from the other eleven sources.

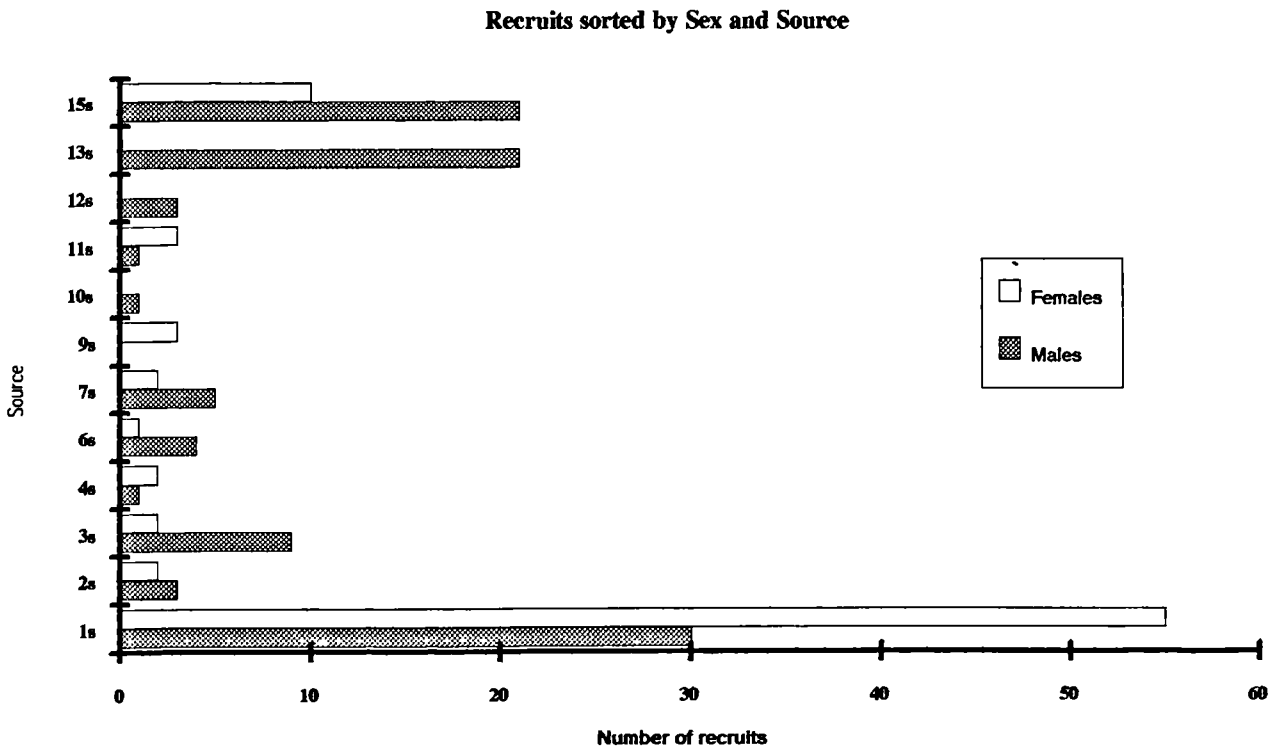

Figure 8.44

The majority of the male members of staff were drawn from sources No1, 13, and 15., with sources No13. and No15. sharing equally in their contribution to the total male staff cohort.

Figure 8.45 and 8.46 indicate the ages and sex of the recruits. These Figures confirm the emphasis of youth within the organisation, tempered by a degree of maturity in other staff members. Some 55.1% of all staff members being under the age of 36, with an almost even split of this sub-group of staff members being male and female.

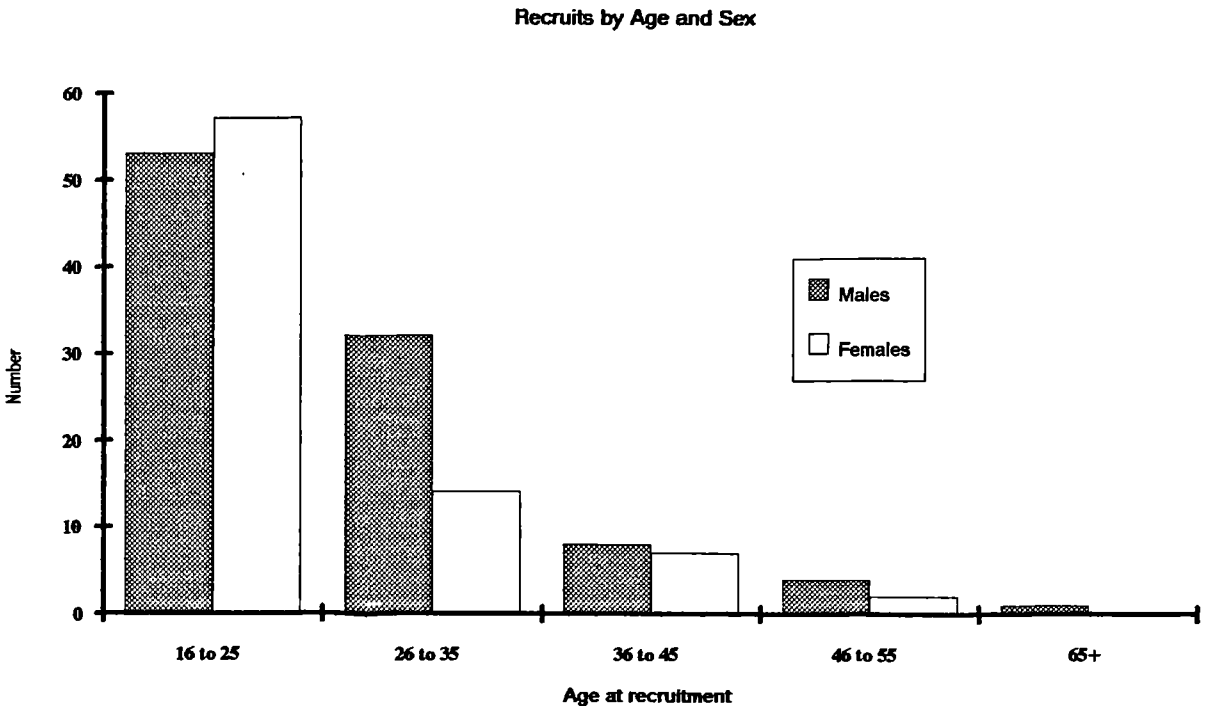

Figure 8.45

The nature of the tasks undertaken by the organisation may well influence the age ranges deemed desirable. Execution of surveys, property valuations, field inspections, land and property management, of any nature, demands that the individual be flexible, physically active, and prepared to work in varied and wide ranging environments. Also influencing the age range of recruits will be the image of the organisation which must be perceived by clients as dynamic, challenging and yet professional and stable. These ends are met by securing both the younger candidates and also the mature applicants.

The organisation made available data for eleven years of recruitment and from analysis of this annual data, the various numbers of recruits by each source may be established, and this information is shown in Figure 8.47.

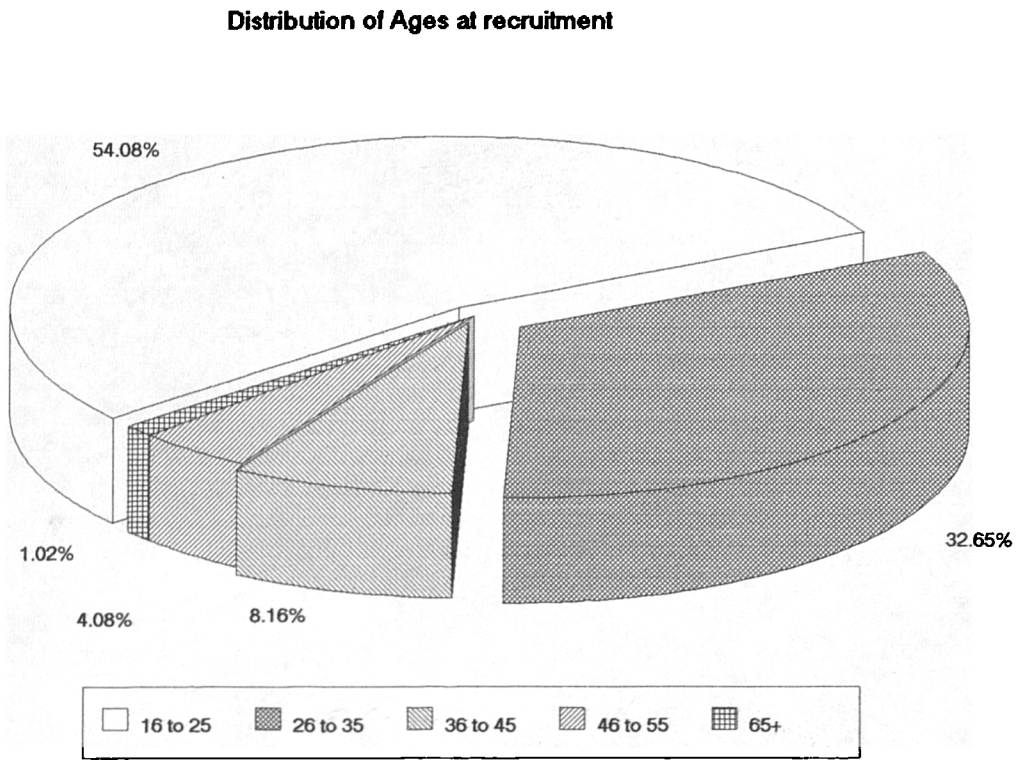

Figure 8.46

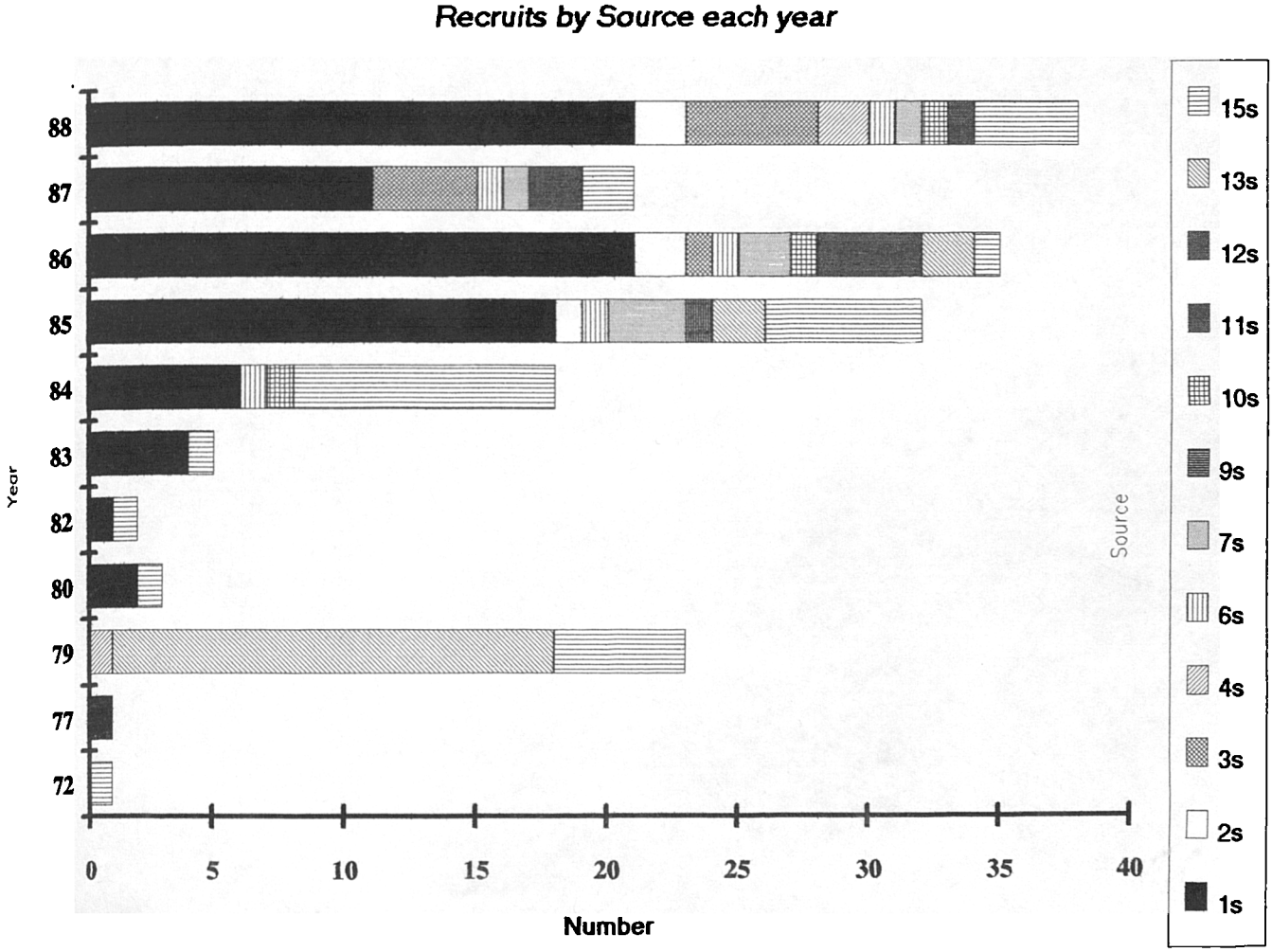

Figure 8.47

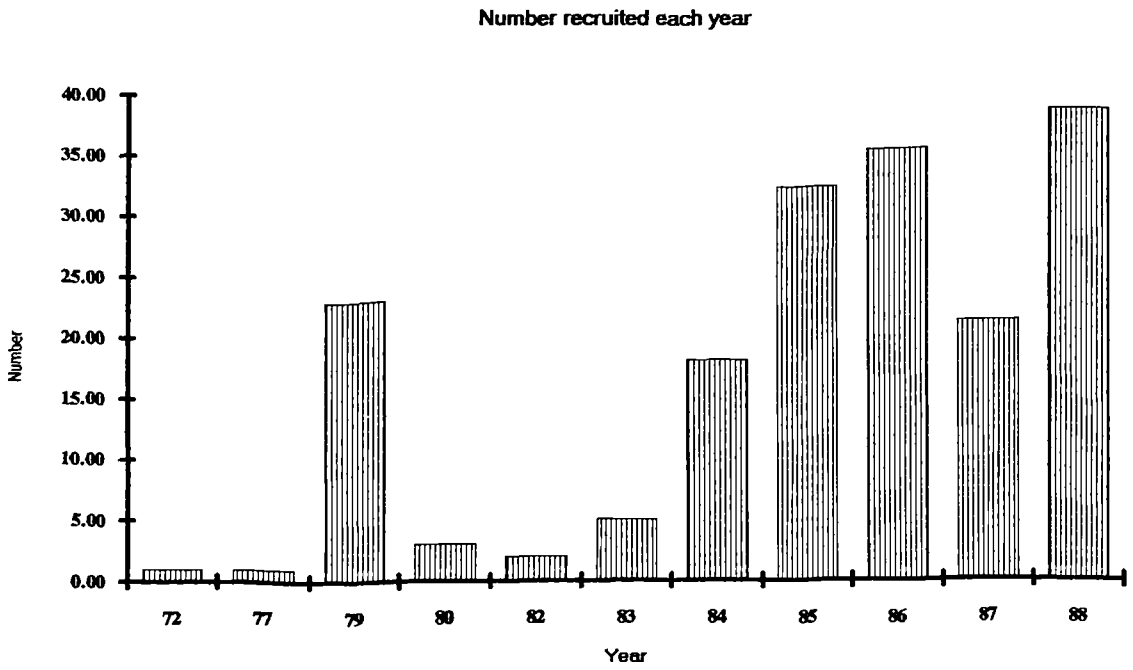

Figure 8.48

This analysis clearly suggests that in the last six years, of the available data, the use of source No1. has assumed predominance. The numbers of recruits secured by the organisation, each year, has witnessed substantial growth during this six year period, as shown in Figure 8.48. This growth may in some part be due to the cyclical nature of the UK Construction Industry, and its associated service sectors (as discussed in Chapter 2).

Analysis of the lengths of service provided by each recruit from the various Sources of Recruitment indicates that the organisation secured a mean service of 3.14 years from the staff. The various lengths of service are shown in Figure 8.49, along with the distribution of the service periods for males and females. The data clearly indicates that the females have a large proportion of their cohort giving service of less than one year, whereas the majority of the males are seen to fall within the 1 to 5 years service bracket. Figure 8.50 indicates the numbers of staff whose service exceeds or fall below the mean service period. No female member of staff exceeded the mean service period of 3.14 years.

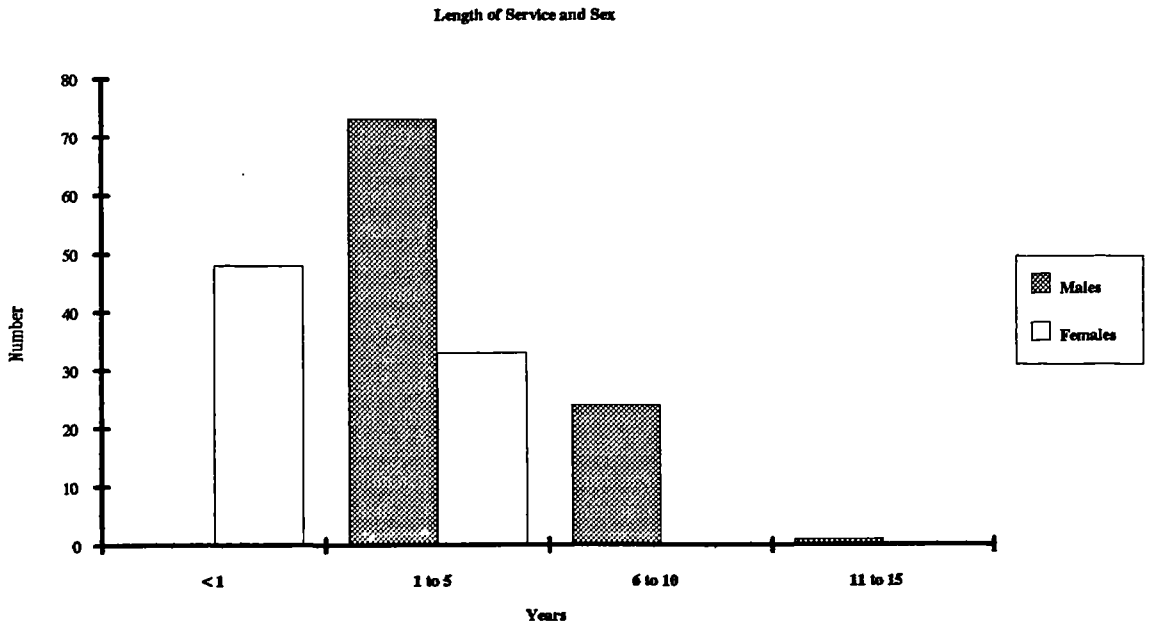

Figure 8.49

The Sources of Recruitment are next considered in relation to the mean service produced by each source, and this information is indicated in Figure 8.51. From this figure it can be established that three sources provided service periods which exceeded the organisational mean service period. These sources were Nos4 ,13, and 15.

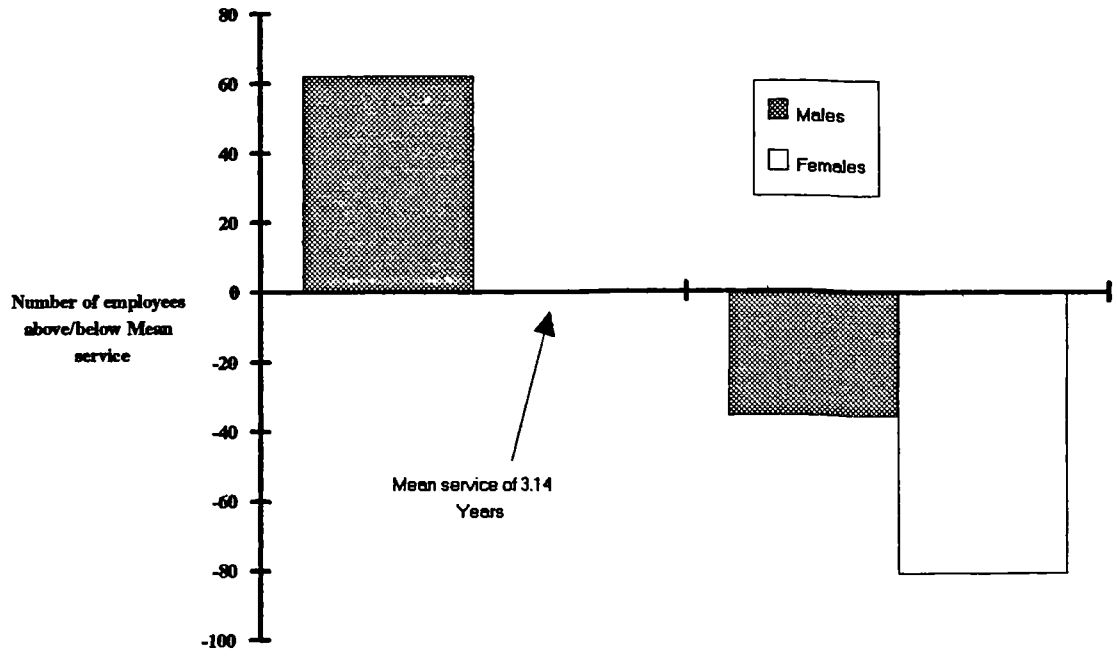

Figure 8.50

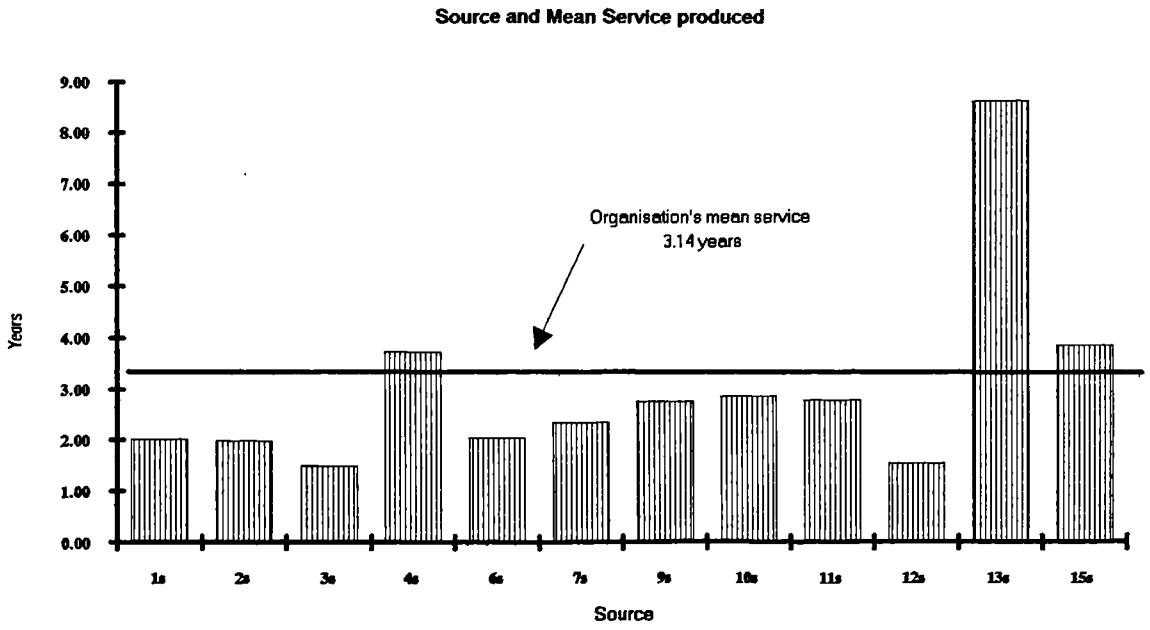

Figure 8.51

The internal recruits providing the greatest mean length of service, followed by the use of a Recruitment Agency, and the Applicants Own Initiative. The variance from the organisational mean service is shown in Figure 8.52 and serves to emphasise the variation in the mean service levels produced.

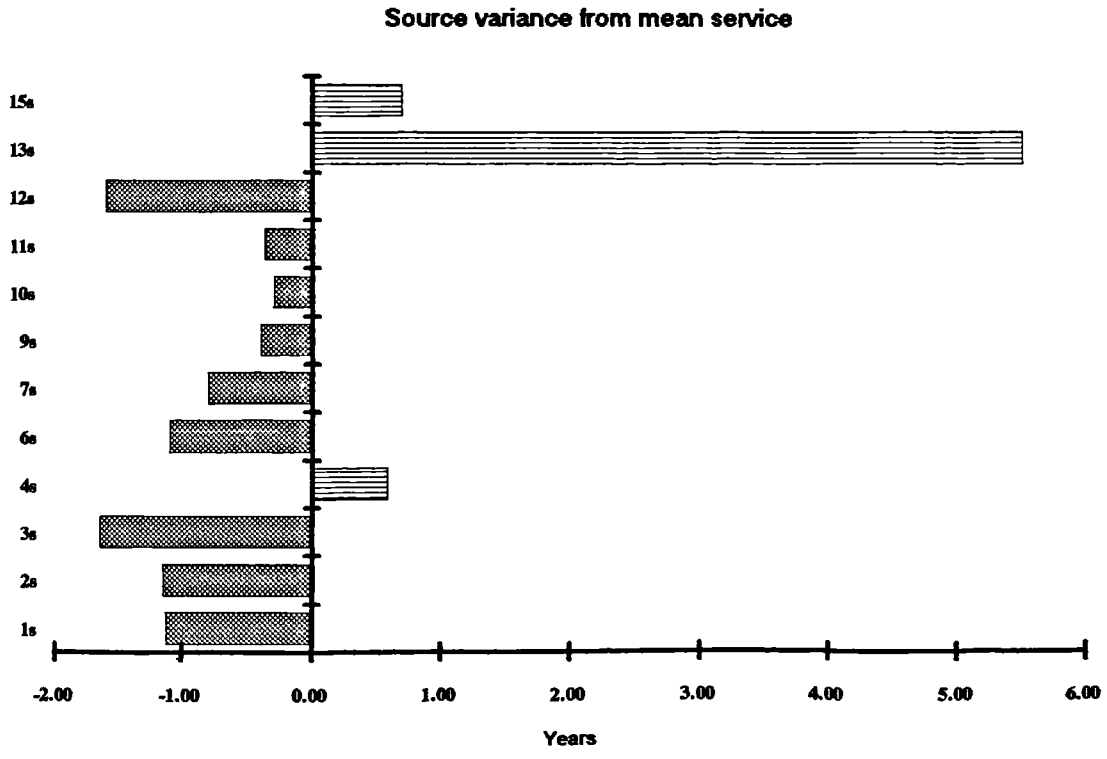

Figure 8.52

Development of Quit Rates for each of the Sources of Recruitment allows further analysis of the situation pertaining within this organisation, these Quit Rates are shown in Table 8.10.

Source No	Quit Rate (%) for source	Overall Quit Rate
1	37	
2	40	
3	10	
4	50	
6	50	
7	71	
9	0	
10	100	
11	0	
12	0	
13	0	
15	46	
All sources		34.8%

Table 8.10 Quit Rates for Organisation No4 number of recruits = 126, quits = 44.

The Quit rate for source No3. is 0%, compounding the view that this source of Recruitment may be viewed as the 'best performer' both in terms of the mean length of service produced and also in terms of stability of the cohort secured by this source. The overall Quit Rate of 35% may be perceived as one which is realistic, and acceptable, in light of the large number of female staff who stay with the organisation for less than one year.

The composite data collected for the organisation was entered into the TWO-WAY ANOVA and the resulting output from this testing is discussed later in this chapter.

8.6 ORGANISATION No5

This organisation provides a non or semi-skilled ancillary education service to the construction industry, with its principal location in the centre of Glasgow, with annexe locations on the periphery of Glasgow. Due to this peripheral nature of the organisation in terms of true construction activity it may be argued that this qualifies the organisation for the status of 'control'. Full data on all personnel was not available at the time of the study, access being to the weekly paid employees' records only.

At the time of the study there were 56 such individuals within the organisation, having been recruited from the seven (7) Sources of Recruitment as shown in Table 8.11.

Organisation	Source of Recruitment (key to numbers shown below)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
No 5	x	-	-	-	-	-	-	-	-	x	x	x	x	x	x

x = used, - = not used.

Table 8.11 Sources of Recruitment Utilised

Key to source numbers.
1 = Local press advertisement, 10 = Casual call-in to office/return of application blank,
11 = Training Agency, 12 = Head hunted, 13 = Internal sources , 14= Job centre/D of Emplt.,
15 = Other/unknown e.g. phone call, letter.

These Sources of Recruitment gave the various percentages of recruitment as shown in Figure 8.53. The major proportion of the employees being secured by the use of source No14., from which some 46.23% of all employees were recruited. This analysis is supported by the numerical values shown in Figure 8.54.

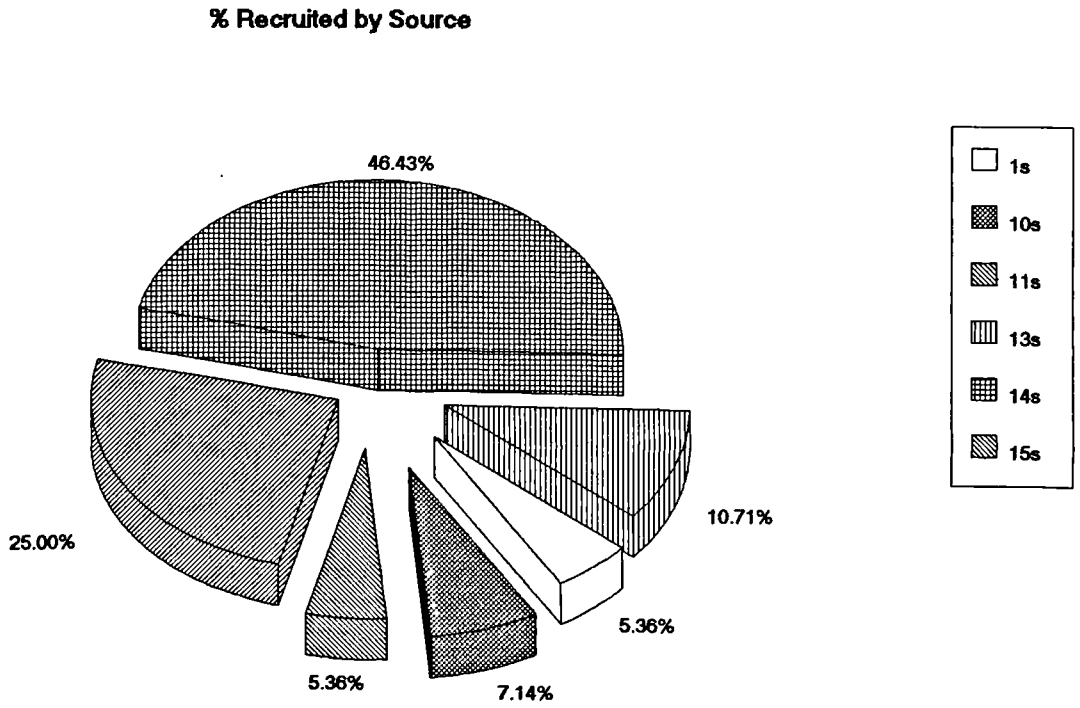

Figure 8.53

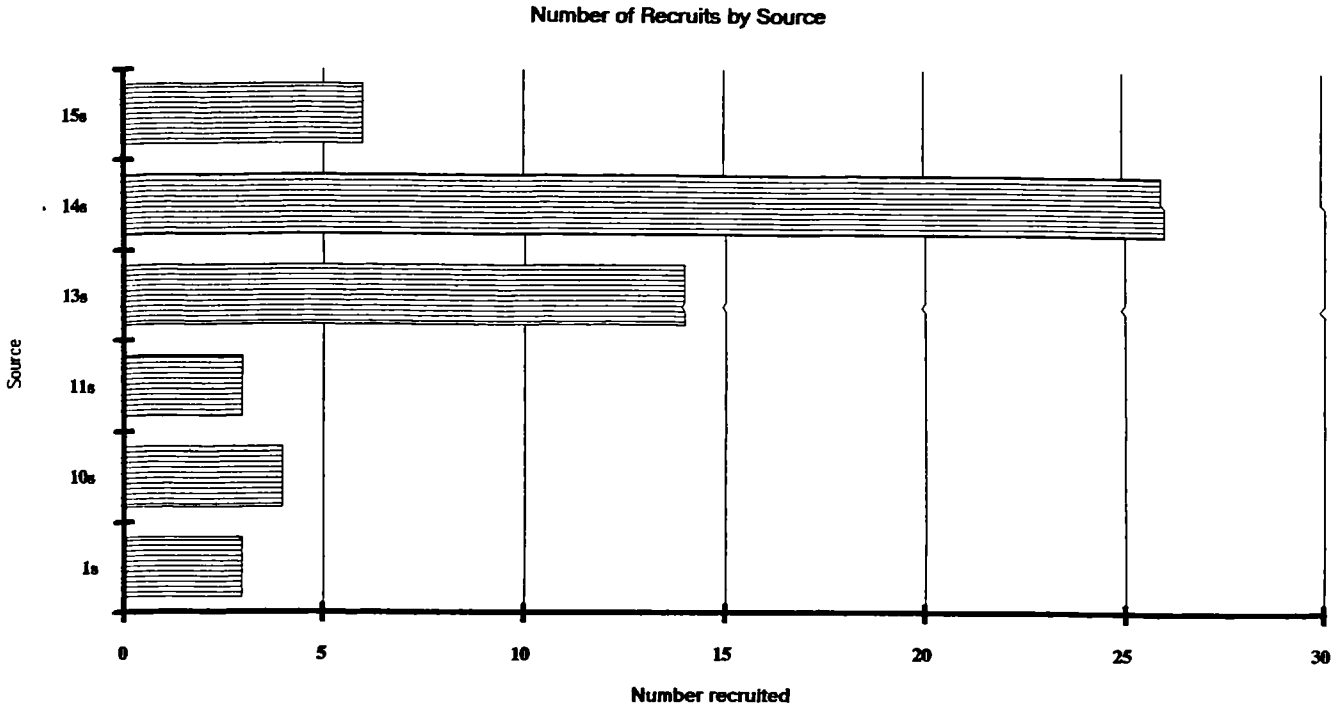

Figure 8.54

When the age ranges of the recruits are analysed it can be ascertained that the more *prevalent age bracket within this* particular Recruitment source group is the 26 to 35 year olds, indeed some 57% of all Recruitment sources utilised have this age group as the more prevalent range. The distribution of ages at recruitment are shown in Figure 8.55, which indicates that recruits from within all age ranges have been employed by the organisation.

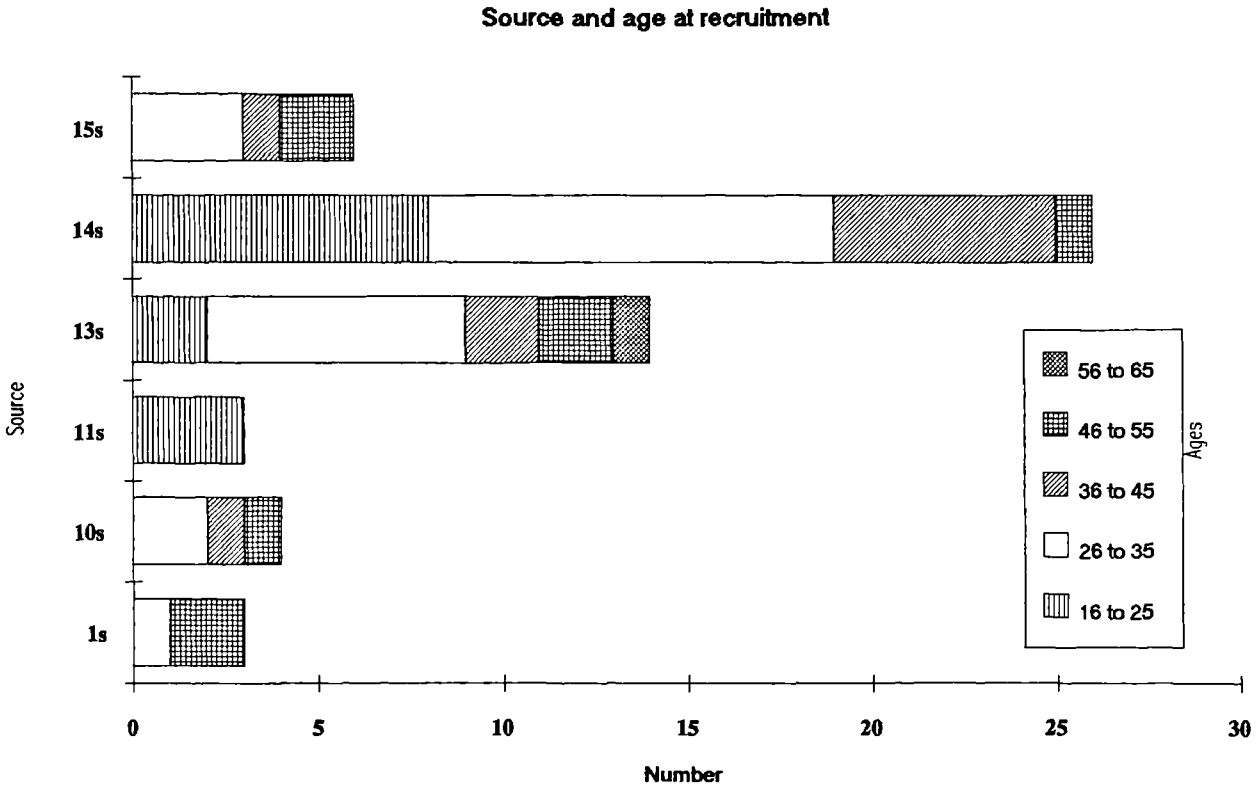

Figure 8.55

This age range (26 to 35) would be consistent with individuals who had had previous employment experience and now sought either new employment or, if unemployed, employment. The Job Centre being perceived by the potential recruit as perhaps the front line in terms of securing news on vacancies which would allow the full use of any or all of their limited talents, and seen by the organisation as a ready source of 'able' individuals especially in light of the organisations limited work areas and therefore need for employees who are relatively poorly qualified or unskilled. Of the sources used, only one did not bring about the employment of any females, this being source No1. The numbers recruited from each source of Recruitment are bisected into sexes in Figure 8.56.

Further analysis of the sexes into age bands shows that the major proportions of both males and females fall within the two bands of ages 16 to 25, and 26 to 35 years old. This data is shown in Figure 8.57, with the percentages distribution for each age band shown in Figure 8.58.

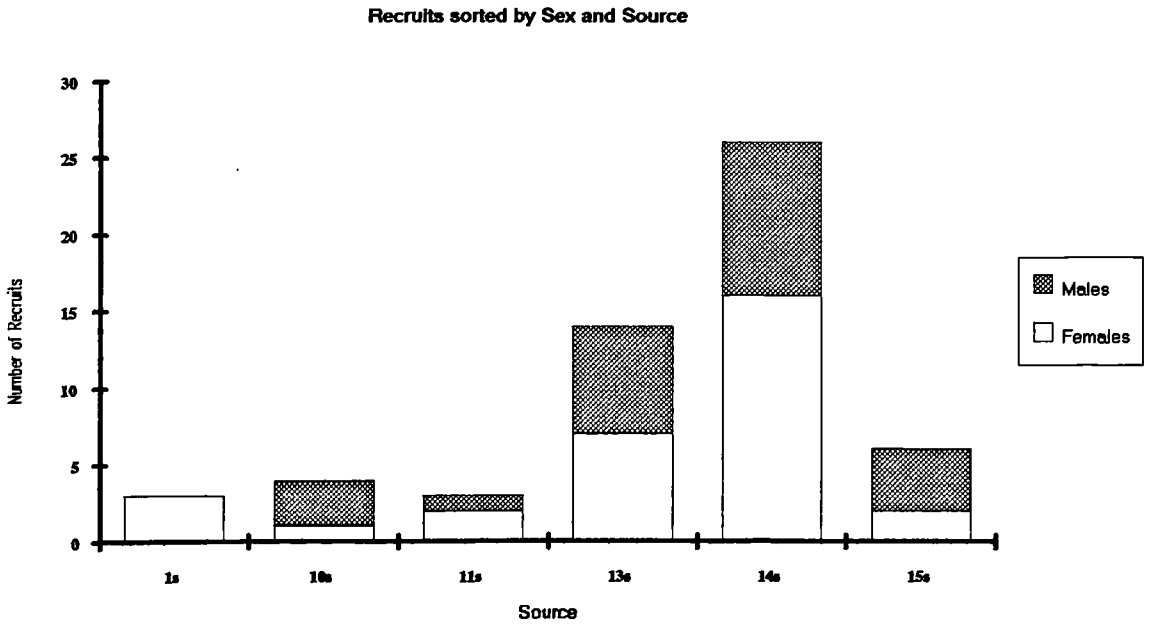

Figure 8.56

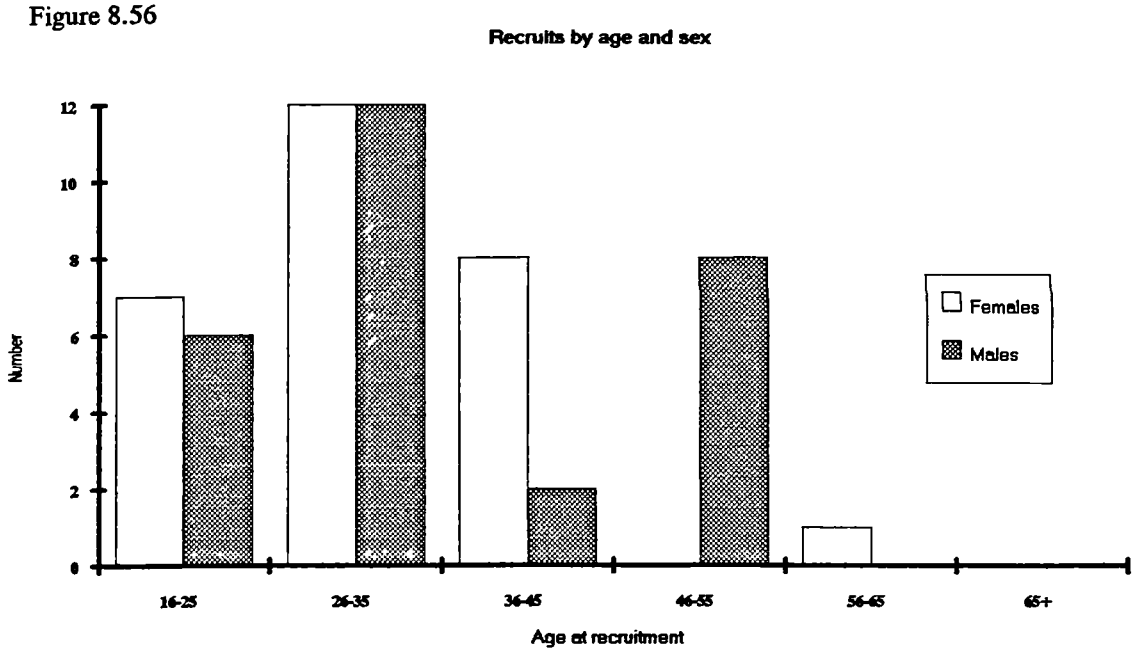

Figure 8.57

It is interesting to note that the organisation were actively prepared to employ women in the age range 46 to 55 years old, with some 14.28% of employees falling into this category.

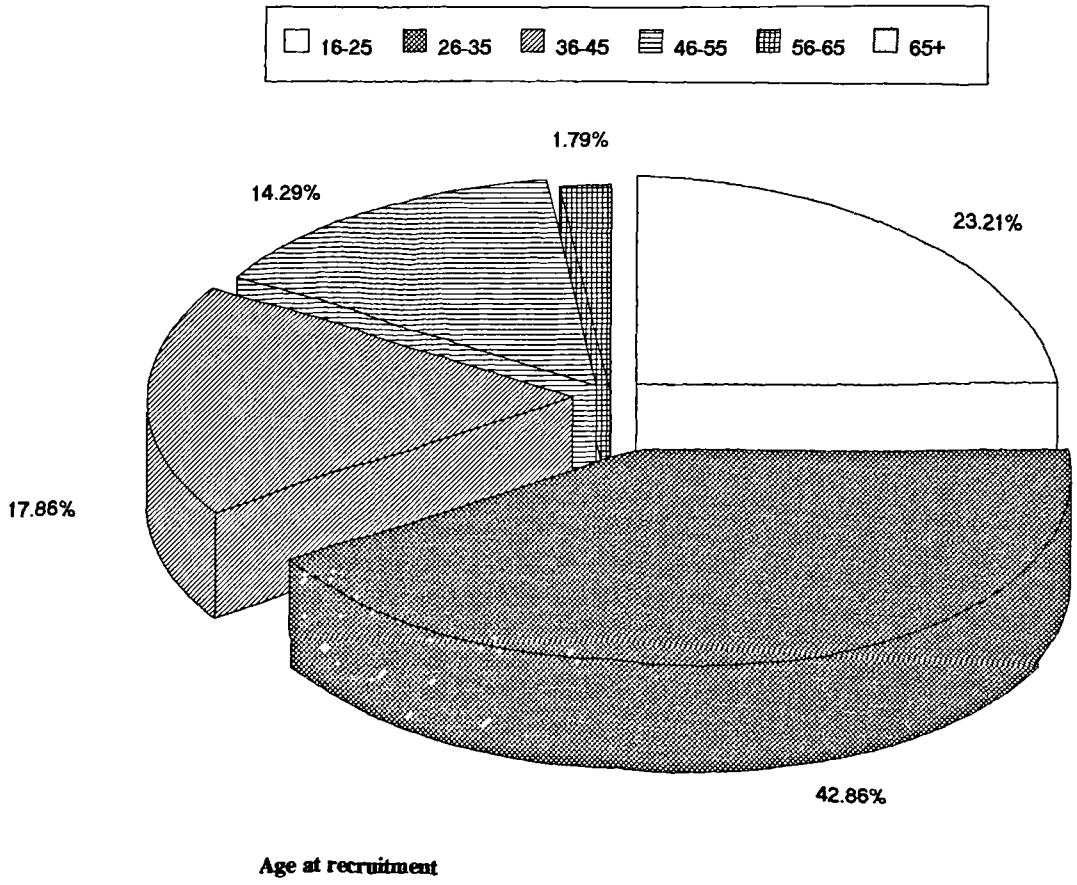

Figure 8.58

The sources utilised in securing employees each year are shown in Figure 8.59, from which it may be established that on an annual basis, source No14. has been regularly utilised in sourcing the employees. The actual numbers recruited each year are shown in Figure 8.60, with the peak years being 1988 and 1991, although it can be seen that the numbers recruited has been growing steadily from 1988 onwards.. The remaining years have shown almost a cyclical nature in that there are 2 - 3 years where numbers recruited are low, followed by 1 - 2 years where recruitment is high.

The various recruits secured each year give a variety of service periods as shown in Figure 8.61, from which it may be established that a large number of the employees have given not more than five years service. The organisation's mean service is 5.37 years, as shown in Figure 8.62.

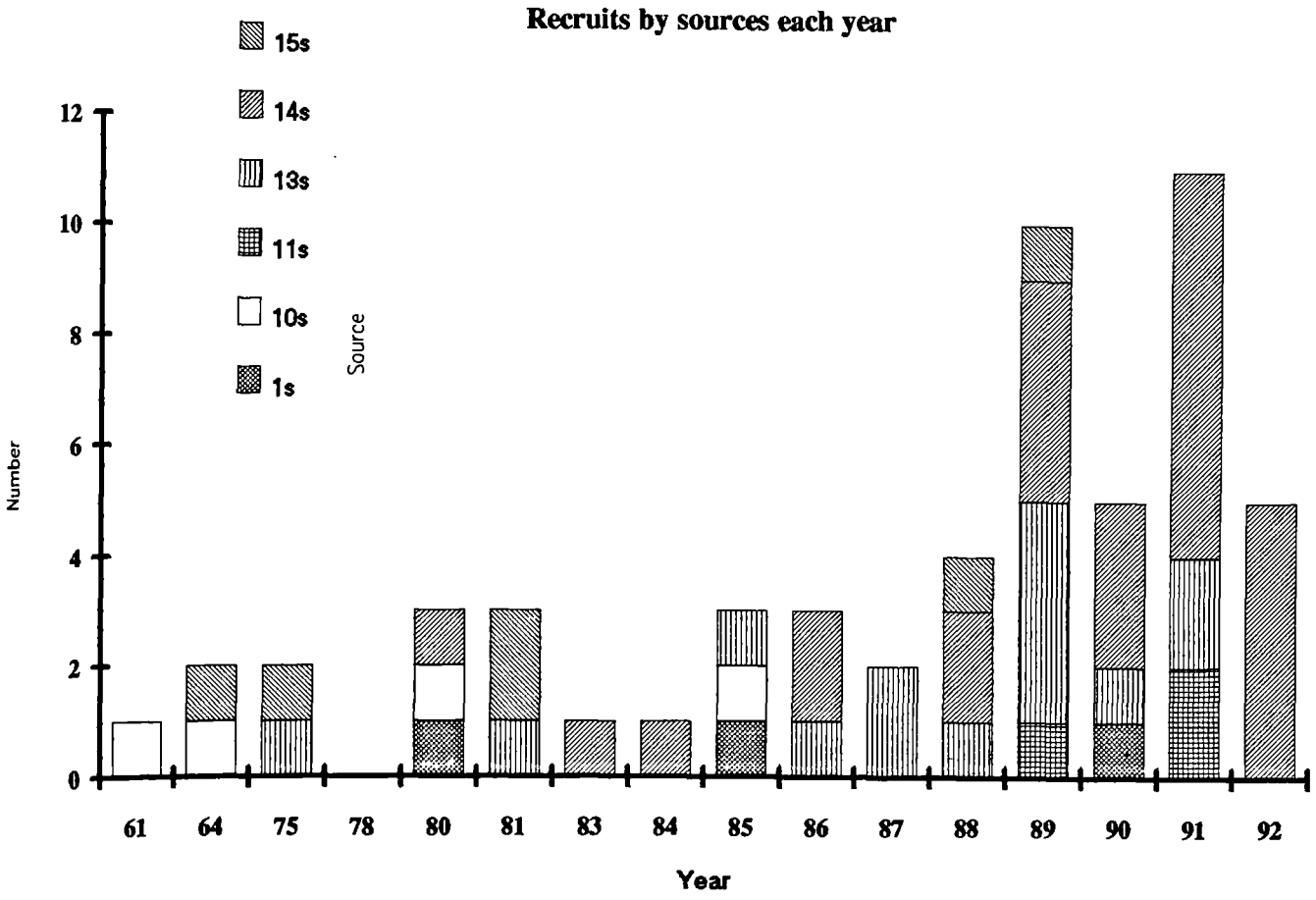

Figure 8.59

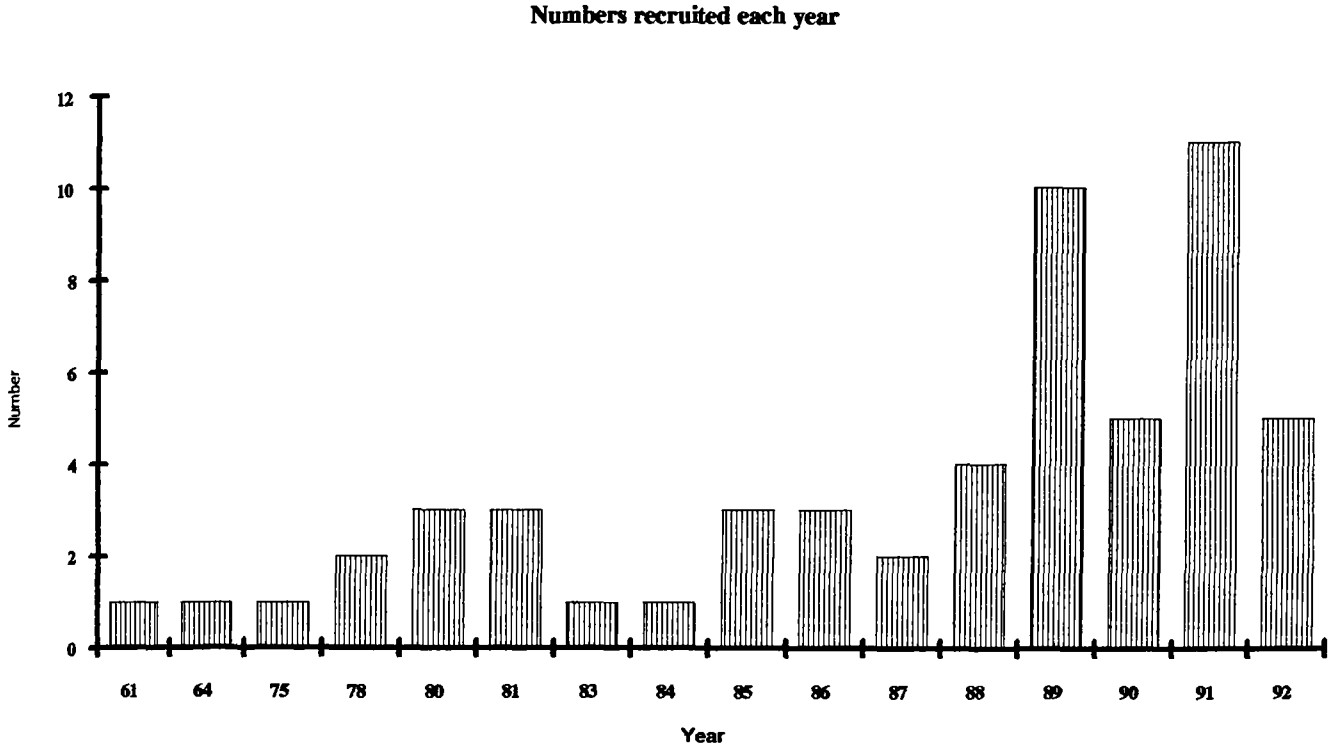

Figure 8.60

Figure 8.61

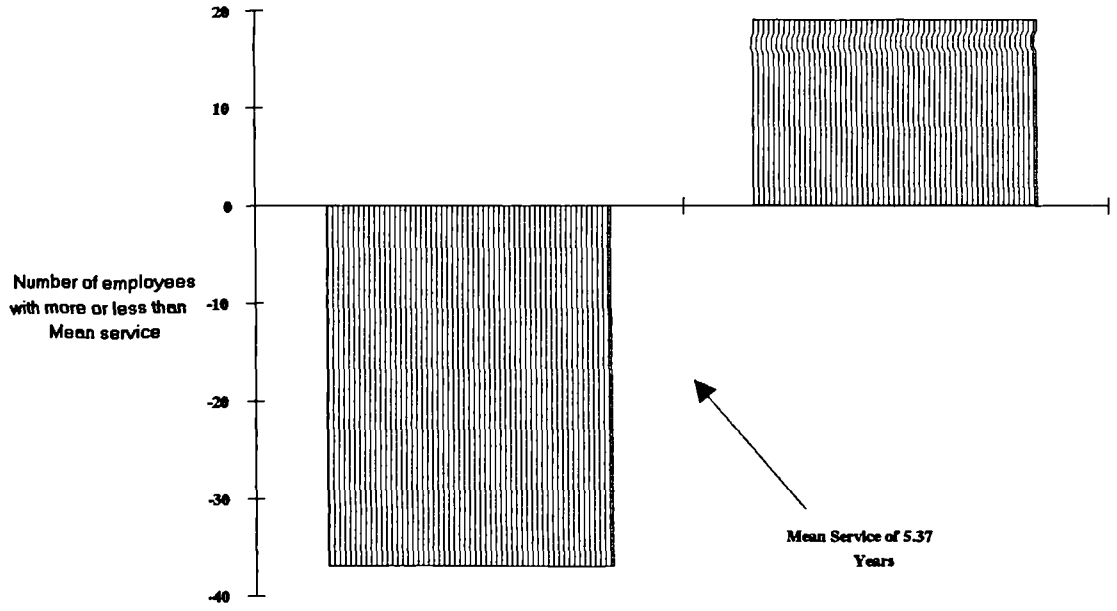

Figure 8.62

Figure 8.62 also indicates the numbers of employees whose service period exceeds or falls below the mean service period. When these service periods are further analysed it is evident that the female employees are the members who provide the lower service periods, with the longer service periods i.e. greater than 11 years, being generated exclusively by males, the processed data is shown in Figures 8.63 and 8.64.

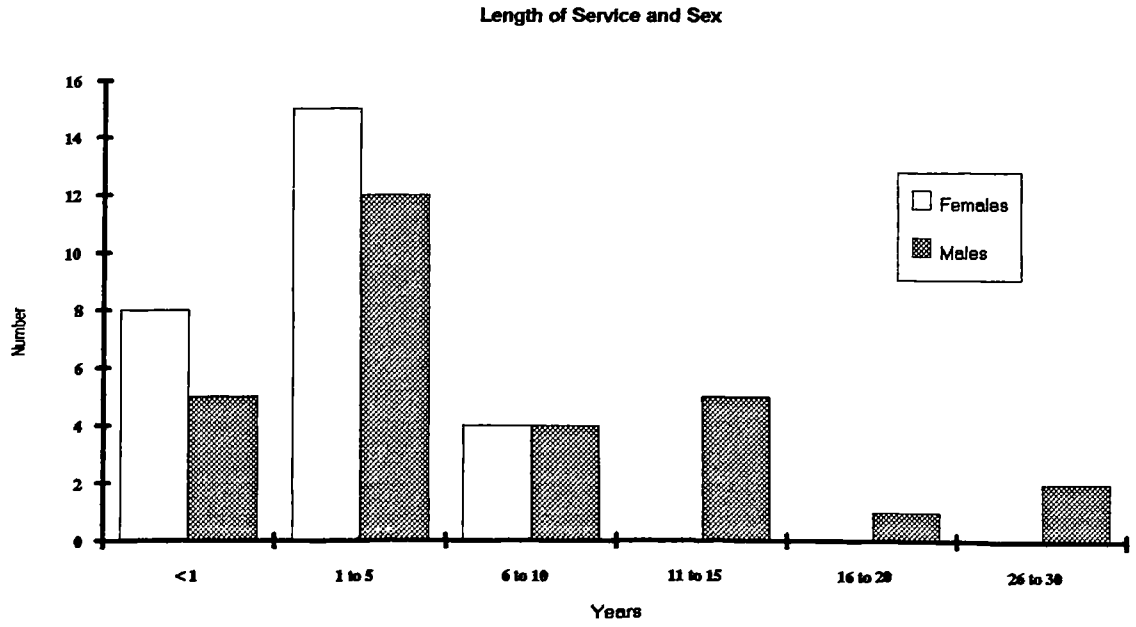

Figure 8.63

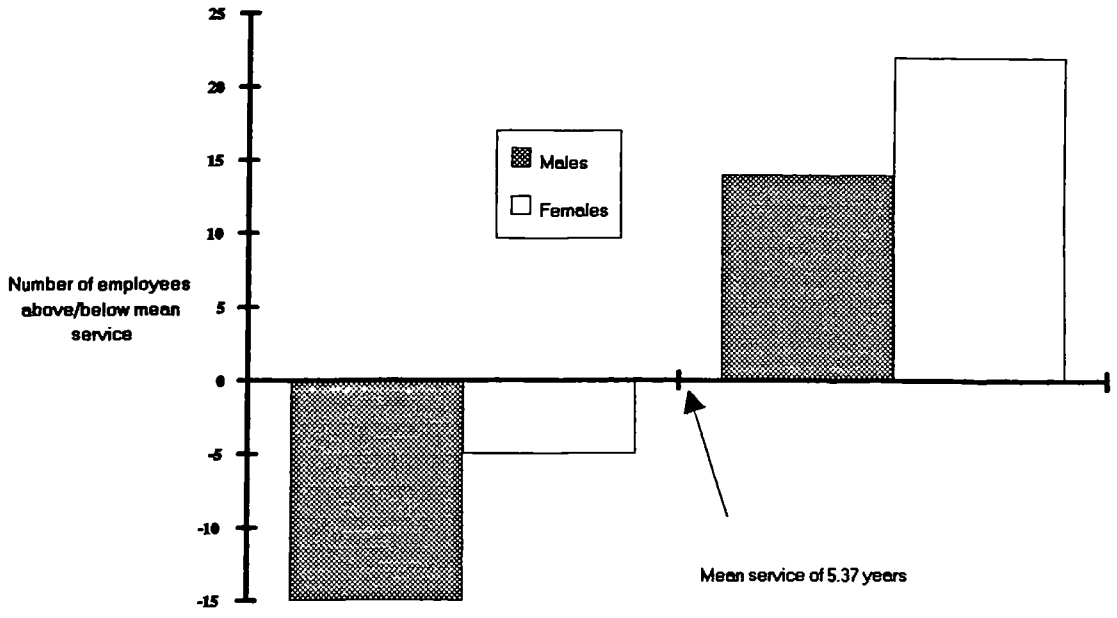

Figure 8.64

Analysis of the service periods produced relative to the sources utilised shows that the organisation secured the longest mean service period from source No10., with only one other source (source No1.) exceeding the organisational mean. The mean service periods are indicated in Figure 8.65, with the variances from the organisational mean shown in Figure 8.66.

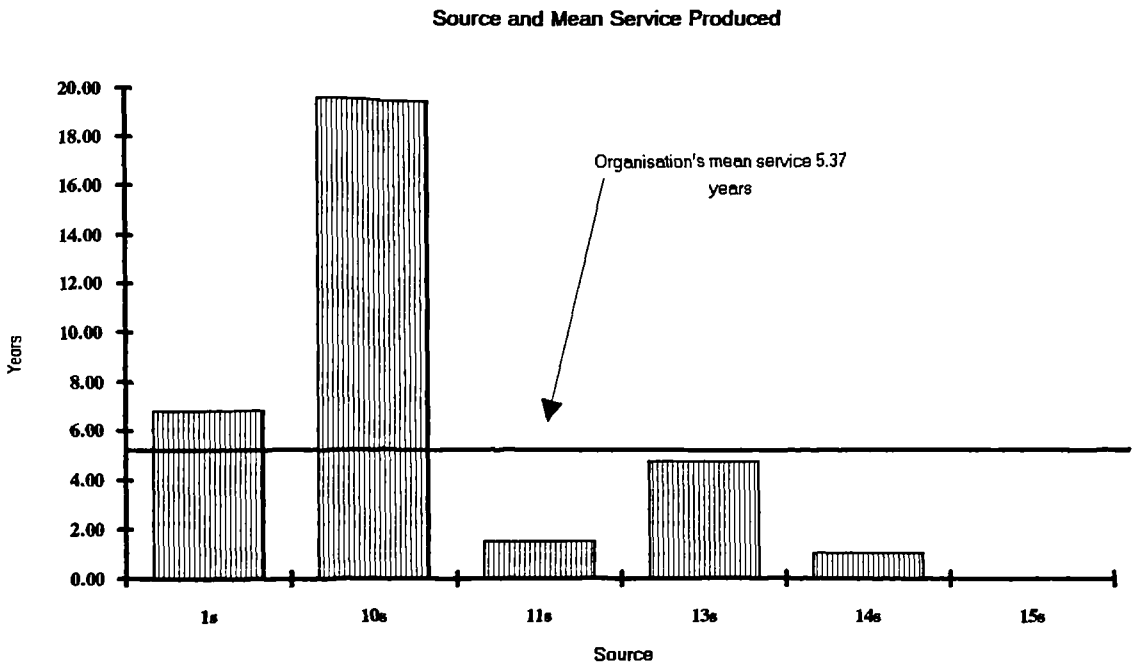

Figure 8.65

Whilst the organisation has favoured the use of source No14. as the principal recruitment method (26 employees recruited via this source as opposed to 4 employees recruited via source 10), it is clear that source No10. provides a substantially longer mean service period. Source No1. also provides a longer mean service period than that for source No14. It may well be that the employees being recruited via source No14. view the vacant post as simply a transitory position prior to securing much more acceptable long term employment, or that the work to be undertaken is lacking in challenge or stimulus, certainly it cannot be the lack of long term job security since the organisation will offer the recruit a long term employment period if that is the recruits need.

During the period 1985 to 1991 there were no Quits from the organisation and therefore it was felt that the quits prior to this time period would be too historical and thus no analysis of quit rates was performed for this organisation. The collected raw data was however entered into the ANOVAS for further analysis.

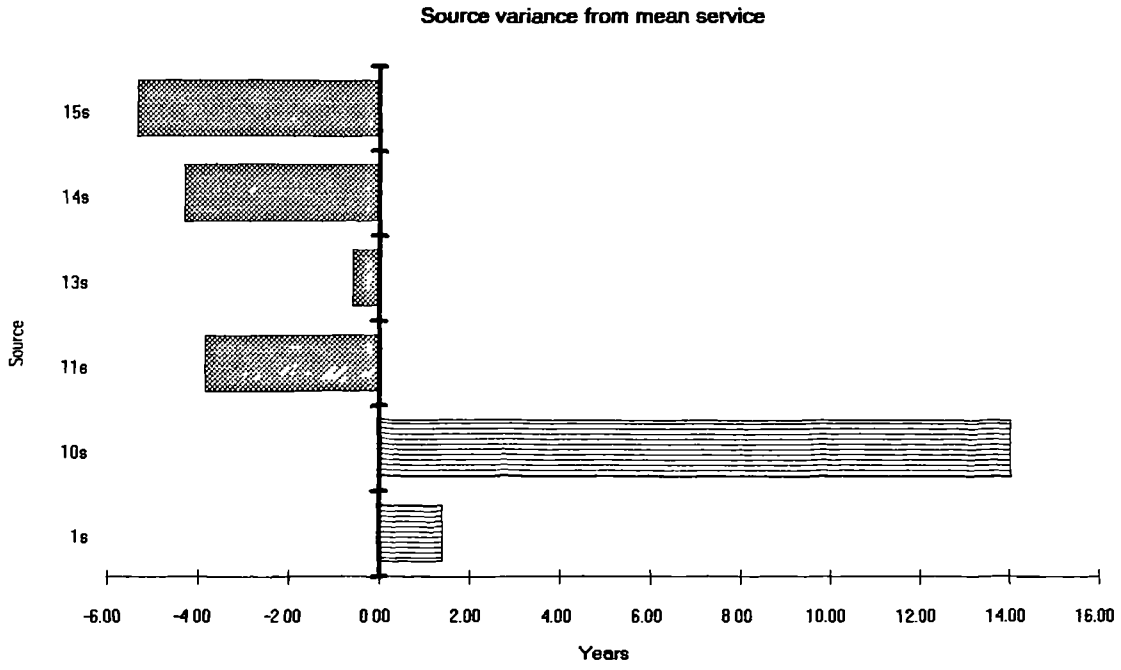

Figure 8.66

8.7 FURTHER ANALYSIS OF THE DATA

The data contained within the 2448 personnel records is capable of yielding much more meaningful *information i.e. qualifications, age and qualifications, etc.* This research is concerned with only a few important aspects of the data but it should be borne in mind that the data, with the correct processing, may be of assistance to other researchers or capable of further analysis. In order to carry the present analysis further use is made of the ONE-WAY ANOVA and the TWO-WAY ANOVA, and the output from the processing of these ANOVAs are discussed in some detail. The raw data used in all analyses is shown in Appendix 2.

8.7.1 ONE-WAY and TWO-WAY ANOVA

Thus far, a substantial quantity of data has been gathered and incorporated within the research e.g. 5 organisations, 2448 personnel records, 15 Sources of Recruitment, and from the initial analyses of this data certain trends are suggested for each of the organisations and the Recruitment sources utilised in their recruitment of employees. These initial trends are clearly shown in each of the foregoing figures. Sound research should not rely simply on suggestions or implied trends to support any

argument, but seek to secure substantial support for the conjectures or hypotheses put forward. This substantial support may be secured by the means of robust statistical anlysis of the gathered data. In this research the ONE-WAY and TWO-WAY ANOVA (Analysis of Variance) are utilised in analysis of the length of service given by each employee for each source of Recruitment. By partitioning the data in certain ways, different sources of possible variation in length of service may be examined and it is possible to highlight the relative importance of the various sources of variation.

The output from the ONE-WAY ANOVAs are shown in Appendix 3, with the output from a TWO-WAY ANOVA shown in Appendix 4. When executing the TWO-WAY ANOVA it may be argued that the size of organisation No2. may in some way distort the underlying true picture. In order to counter this argument a second TWO-WAY was carried out with the data from organisation No2. excluded from the processed data set, and the output from this test is shown in Appendix5. Note that since the same data have been utilised for different tests, care should be exercised when interpreting the probability associated with the calculated F values.

The TWO-WAY ANOVA shows both organisation and source of Recruitment as significant sources of variation in length of service, and also indicates interaction between source of Recruitment and organisation. This is true whether Organisation No2 is included or omitted from the data set.

Following the idea that the source of Recruitment utilised will serve as an indicator of the likely stability and tenure of the new recruit, one of the hypotheses tested was that:

$$H_0: \text{mean}_{,1} = \text{mean}_{,2} \ldots\ldots = \text{mean}_{,15}$$

(where $\text{mean}_{.n}$ is the mean length of service for Recruitment source n over all organisations), against the alternative that at least one mean was different from the others. There is only sufficient statistical evidence to reject the Null hypothesis whenever the calculated value of F in the ANOVA Table has an associated probability of less than the chosen significance level, which is generally 0.05.

Partitioning the data into organisations and executing 5 ONE-WAY ANOVAs allows the testing of the hypothesis that for each organisation:

$$H_0 : \text{mean}_1 = \text{mean}_2 = \text{mean}_3 \ldots\ldots\ldots\ldots = \text{mean}_{15}$$

(where mean_n is mean length of service for those recruited from source_n), against the alternative that at least one is different.

The output from the 5 ANOVAs shows that except for organisation No3, there is statistical evidence to support the rejection of the Null hypothesis. This implies that for each of organisation Nos 1, 2, 4, and 5, there are differences in mean length of service for certain sources. Further analysis using Tukey's Honestly Significant Difference statistic clearly indicates for each organisation those Sources of Recruitment which give significantly different mean lengths of service. The values derived from the ONE-WAY ANOVAs are shown in Appendix 3.

For Organisation No3, however, there is no statistical evidence to support any difference in the length of service for each source of Recruitment since the computed probability for the organisation is some 26.5%. Although examining the mean length of service for each source of Recruitment does suggest that source No6 is 'better' than the other three Sources of Recruitment utilised by Organisation No3. The analysis may have been affected by the organisation's extremely high quit rate for each individual source of Recruitment (100, 52, 65, and 55 % respectively), as well as the composite quit rate for the organisation as a whole i.e. 57%, and also by the fact that the organisation was factory based. With a longer timebase perhaps the statistical analysis might give some significant differences.

Chapter 9.0

DISCUSSION AND ANALYSIS OF THE RESULTS

9.1 GENERALLY

It has been shown that construction activity is like many other industries in that it is subject to fluctuations. These fluctuations may be in line with, preceding, or lagging behind the general economic situation. Whilst the construction demand may have peaks and troughs, there remains a need for a basic level of output, which may be a general requirement, and this output must be attained through the efficient use of resources. Management of the human resource has, historically, been the area where management within the construction industry have exercised least precision and comprehension. Legislative issues are readily taken on-board and integrated within the organisation's operations, whilst the more unfamiliar psychological management topics are, relatively speaking, shunned.

Labour turnover is readily seen within the industry and yet in many respects is accepted as 'the norm'. 'How' and 'Why' the turnover should occur are central themes to both this research and efficient management of the human resource, and have been considered within the foregoing chapters.

The following narrative seeks to ensure that the reader has grasped the nature of the subject, the four hypotheses stated and developed, and the need for the research.

9.2 HUMANS IN CONSTRUCTION

The literature reviewed and general industrial experience has shown that the human resource is an important element within the construction organisation, and generally, within the industry as a whole. The cyclical nature of the construction processes often ensures that consideration of issues relating to management of the human resource are placed low down in the order of priorities. Thus labour turnover, whilst having significant ramifications, is given little attention by management. Attention focused on labour turnover may provide the organisation with positive benefits which negate or reduce those effects which are seen to be negative in nature.

The thesis has shown that there is a clear need to consider the various Sources of Recruitment utilised and the relationship of these sources to Labour Turnover within the construction industry. The little research which has been executed in this general area has typically been related to other industries. The construction industry in many ways deserves to be considered unique because of the reasons given earlier (Chapter 2), resulting in the need for research which considers the topic from a construction standpoint. This standpoint is supported by the many interacting forces which are seen to be at work within the industry.

Forces at work act upon the individual, the organisation, and the industry, each of which may ultimately bring about or lead to labour turnover. Each of the forces may serve to act as the primary cause of labour turnover or perform as either a contributory element, or as a catalyst. Consideration has been given to many of the more relevant factors (in Chapters 2, 3, and 4), and whilst the factors themselves have been scrutinised so too have the ramifications emanating from their influence. These ramifications having both positive and negative outcomes for the individual, the singular organisation and the industry as a whole.

9.3 THE CONSTRUCTION INDUSTRY

There can be little doubt that the construction industry's environment is constantly changing. This change being brought about by influences such as: legislation, new technologies, new materials, new or modified working practices, a variety of pressure sources, lobbyists, clients, and also the industry itself. It may be argued that the industry should be perceived as being unique since the product is constantly produced on varying locations; the product is comprised of numerous component parts supplied by others who may be either static i.e. factory based or mobile; no two projects are totally similar, even the modern housing estate whilst appearing repetitious may contain many variations in each dwelling; the climatic conditions under which the operatives have to operate are subject to fluctuation, and are seldom conducive to a

healthy working lifestyle; the organisations which make up the industry are predominantly small in nature; the workforce is generally perceived as being the poor relation in terms of education, training and development, and also in terms of financial stability and security. All of which serve to make it stand out from other industries. Because of this uniqueness there exists a strong argument for management to look at theoretical models or hypotheses proposed by writers considered within this thesis, which generally have been derived from other industries, and to positively filter the applicable areas whilst resisting those areas which may be considered to be obscure or unrelated. Many of the writers discussed earlier have taken management thinking on organisations (which are primarily fixed in the one locus or a singular product or a clearly defined, stable market, generally manufacturing) and applied these thoughts liberally across the widest possible organisational spectrum. This approach clearly negates the perceived uniqueness of the construction industry. No doubt many of the basic tenets underpinning general organisation theory will apply to the bulk of the construction industry participants, but so also will we see those organisations, and individuals, who do not mesh within the stereotyped jigsaw.

9.4 ADOPTING ALTERNATIVE IDEAS

Since the construction industry is in many ways unique, so management must be seen as willing to adopt, or at least consider, new or interesting ways of maximising the functional utility of the human, both as a person and as a resource. Motivation theories have long been seen as a primary method by which this functional utility may be increased.

Human motivation is complex and subject to many influences, both at the individual level and at the industry base. No doubt exists though at to its power in determining courses of action. Control, or at least direction, over these courses of action enables the organisation and the industry to achieve desired goals and objectives. The applicant responding to or accepting a vacancy is directly influenced by the then

current motivational state. So too the decision to exit any position in the organisation, this course of action will have been carefully considered and measured by the individual. The ramifications from the individual's actions may affect not only themselves but also many others.

Labour turnover has profound effects upon the management of the human resource. Therefore management of the organisation must be able to view the overall processes at work and to comprehend the influence that each of the active factors may have upon the individual, whether it be to apply for a vacant position within the organisation, or to withdraw from the organisation. The departure of course being part and parcel of the Turnover process.

9.5 SUPPLY AND DEMAND

Chapter 4 has considered, in some detail, numerous aspects of labour turnover and effects on the organisation. Management's responses to labour turnover have been discussed along with strategies available to eradicate or reduce some of the difficulties associated with this turnover.

Labour turnover within the construction industry has generally been taken to be an acceptable everyday occurrence, and therefore management who are faced with the task of adequately resourcing the contractual obligation must seek measures which will enable some form of forecasting or predictability in their labour resource supply.

It has been shown that the issues and areas which may influence the existence of labour turnover and its physical rate may be considered in isolation, or more appropriately, considered under an holistic approach. Work within the research has shown that each employee may require both individualised attention and consideration when part of some grouping. Evidence has been provided to show that labour turnover, if managed properly and strategically, may well be a beneficial weapon to be fully utilised by management under the appropriate set of circumstances, and aid in

smoothing the peaks and troughs often seen with human resource supply and demands.

Various measures of labour turnover have been considered, with the advantages and disadvantages of each highlighted. It is suggested that whilst no measure has the right to be used in isolation, they do contribute to the overall picture of labour turnover within the organisation.

9.5.1 Recruitment Sources

An underlying premise within the consideration of labour turnover is that there are potential employees in the market place. Where the recruits may come from, and the influence this source has on the length of service is of significance in the overall process of labour turnover. The source of recruitment seen as having the greatest utility may well be one which is used at present or one which should be adopted as the in-house source for recruitment. The research undertaken has shown that the sources used in securing employees for the organisation may have significant impact on the effectiveness of recruitment and in practical terms, the stability and impact of the recruit on the organisation. The organisation may gain significant benefits from use of the appropriate recruitment source, e.g. in monetary terms, stability, the ability to be able to say confidently that a particular candidate is likely to remain for a certain period, reduction in costs, precise targeting of candidates, and also the improved general image of both the organisation and the industry. When seeking to enhance the expected realisable value of the individual within the organisation then the organisation must ensure that the probability of the individual remaining within the organisation is as high as possible, i.e. by use of the appropriate recruitment source.

Many other areas of positive benefit have been discussed and serve to reinforce the basic argument that consideration of the recruitment source used is beneficial to the organisation, directly, and of merit to the industry generally.

Management may require to consider the belief of engaging 'the whole being' rather than simply an individual who can slot into particular role areas and carry on vacated work areas without interruption of the flow. Since the individuals applying to fill the vacancy will bring with them baggage consisting of varying degrees of skills, attributes, abilities, knowledge and beliefs, so then management must accept that a straightforward swap-over is virtually impossible.

9.6 PROGRESSION WITH THE RESEARCH

In order to carry the research farther it became necessary to establish an appropriate methodology which would not only provide sufficient quantities of data for analysis, but also withstand the rigours of subsequent scrutiny. The approach to the field-work may serve to simplify the workload for the researcher, or if inappropriate, add to its complexity. Therefore careful consideration has been given to establishing the most appropriate methodology suitable for adoption.

The various constraints and choices in this research have been outlined and considered in some depth and from this, the conclusion is drawn that the execution of the field-research by Analytical Surveys is appropriate. The Analytical Survey allows as wide a range of organisation types as possible to be surveyed and ensures that the research is broad and deep, so aiding in its replicability. The organisations chosen for survey are seen as being as representative of the wider industry population as the research constraints will permit.

Also shown by the thesis is how the execution of the Pilot Study provides the researcher with the opportunity to reconsider the methodology selected and the effectiveness and applicability of the study. From the Pilot Study carried out, it is clear that the methodology, after minor adjustment, is sound and that the research has many specific areas which address and underpin the four hypotheses, stated in Chapter 1, and therefore may be seen as being applicable to the wider sample population.

9.7 ANALYSIS OF THE RESULTS

The analysis of the collected data shows that the organisations have preferred sources which are utilised when seeking to secure employees. These preferred sources may not always be the most effective in terms of the length of service produced by the recruit nor in terms of stability of the employee i.e. quit rates. Table 9.1 summates the findings from the research and clearly indicates the disparity between sources favoured and those which are the more effective.

Organisation	Source	No	% Recruited	Service**	Quit Rate~
1	Preferred	2	26.82	6.32	50%
	Better*	3	18.23	13.87	50%
	Worst	1	15.38	2.38	30%
	Organisational mean			5.83	
2	Preferred	15	28.08	1.38	28%
	Better*	13	22.85	16.85	8%
	Worst	2	5.77	0.84	24%
	Organisational mean			1.61	
3	Preferred	15	48.51	1.38	55%
	Better*	6	0.88	2.88	100%
	Worst	15	48.51	1.38	55%
	Organisational mean			1.61	
4	Preferred	1	47.48	2.02	37%
	Better*	13	11.73	8.64	0%
	Worst	3	2.8	1.5	10%
	Organisational mean			3.14	
5	Preferred	14	46.23	1.42	nil in period
	Better*	10	7.14	18.43	
	Worst	14	46.23	1.42	
	Organisational mean			5.37	

Table 9.1 Source Effectiveness

* in terms of length of service, ** mean service period in years, ~ in period considered.

In 75% of the organisations studied the 'better' source gave Quit Rates which either equalled or were lower than the organisation's preferred Recruitment source, and in all organisations the 'better' source gave mean lengths of service which exceeded the in-house preference by at least 100%. Thus providing further support for the use of the 'better' source in preference to other sources.

The output from the 5 ONE-WAY ANOVAs allows the construction of Table 9.2 to highlight the Sources of Recruitment which have significant differences in mean length of service for each organisation. The Sources of Recruitment are placed as ROW and COLUMN headings with any significant difference between numbered Sources of Recruitment being indicated in the body of the table by the number of the organisation for which they occur.

Source	Source 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1								2		2			2		2
2							2	2		2			2	2	2
3	1	1	1	1		1			1						1
4															
5															
6										2			2		2
7													2		2
8													2		2
9													2		
10	5										5		5	5	5
11													2		2
12															
13	4	4	4	4		4	4		4	2	4	4		4	
14	4									2			2		2
15													2	5	

each organisation is shown by its numerical indicator
in each of the sources where significant difference occurs.

Table 9.2 Organisational Source Usage

Making use of Table 9.2, it can be seen that for organisation No5 there are significant differences between sources No10 and each of sources No 1,11,13,14,15, also there are significant differences between source No10 and each of sources No 1, 2, 6, 13, and 14, for Organisation No2. For Organisation No 5 there is also a significant difference between sources No14 and 15. Tables 9.1 and 9.2 therefore suggest Sources of Recruitment which should be used by the organisations involved in the study, in preference to their own in-house chosen source of Recruitment.

The ANOVAs have shown that there are factors at work and the impact of these factors may be quantified and so allow management to consider recruitment sources which are to be preferred before others.

The results derived from the analysis of the collected data allow certain conclusions to be drawn; the development of implications from the research, and also suggestions as to the applications for the findings contained within the research. These are discussed in the following chapter.

Chapter 10.0

CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

10.1 CONCLUSIONS

It has been shown that there is a four-fold problem faced by all managers of construction, or construction related organisations, in that they must:
i) secure sufficient human resources in the face of competition and a varying marketplace;
ii) obtain from these human resources an adequate return in terms of length of service;
iii) exert control over the rate of turnover of the human resources;
iv) comprehend the ramifications deriving from the human resource turnover.

The recruitment practices found within the construction organisations have so far ignored the analysis of recruitment sources as a means of establishing the most effective source of recruitment in terms of both length of service and stability of the human resources recruited via each source. This omission, of such a worthwhile analytical approach, by the construction organisations may add to the strain placed on stretched resources, and also detract from management's ability to fully maximise the resources available to them. Focusing on recruitment sources which may be seen as being less effective in terms of lower employee stability, higher labour turnover rates and negative effects on the organisation, may simply be adding to management's operational problems rather than solving them.

Broad consideration of the recruitment sources used within the participating organisations shows that the organisations do focus on preferred sources but without any detailed analysis of the effectiveness of these sources or the impact of these sources on the efficiency of the recruitment process. Factors which may be seen as integral elements and interacting variables within the practice of recruitment are: the function of recruitment, the underlying demographics of both the industry and employee cohorts, applicable motivational theories and the nature of the construction organisation/industry. These factors interact to compound the challenge facing those who manage the construction organisation, but nonetheless, they have been considered in some detail bearing in mind the uniqueness of the construction industry.

The fifteen sources of recruitment identified and employed within the research were widely used by the organisations, with individual organisations using numerous sources on a recurring basis. Individual source usage by the organisations was as follows:

Local Press advertisements used by 80% of the organisations, National Press advertisements used by 60% of the organisations, Trade or Business Journals used by 40% of the organisations, Recruitment Agencies used by 40% of the organisations, Referral by employee used by 80% of the organisations, Re-employment of an individual used by 40% of the organisations, Referral from School/Careers used by 20% of the organisations, College/University milk-round used by 60% of the organisations, Casual call-in used by 60% of the organisations, Training Agency used by 60% of the organisations, Head hunters used by 40% of the organisations, Internal sources used by 80% of the organisations, the Job Centre/Department of Employment used by 60% of the organisations, Other sources e.g. phone call, used by 100% of the organisations.

Subsidiary Recruitment Agencies was the only source which was not used by any of the organisations; if a recruitment agency was employed then it was on a singular basis. Therefore with an overall usage rate of 93.3% the sources were found to be valid, with no other unmentioned sources of recruitment being discovered in use.

Analysis of the individual organisation's usage of the recruitment sources shows clearly the favouring of particular sources above all others. These in-house preferences were successful in recruiting substantial quantities of human resources but these human resources were found to exhibit lower service periods and stability rates than human resources recruited from those sources identified as the 'better' sources. One organisation preferred to use National Press Advertisements to secure the bulk of their recruits even though this source gave substantially lower mean employee service periods than the 'better' source, i.e. Trade or Business Journals. The recruitment sources giving mean service period values of 6.32 years and 13.87 years respectively.

The second organisation preferred the use of Other sources which gave a mean service period of 1.38 years in contrast to the mean service period of 16.85 years from the 'better' source, Internals. The third organisation also preferred to use Other sources which gave a mean service period 1.5 years lower than that given by recruits from the 'better' source, Employee Referrals (2.88 years). The fourth organisation used Local Press Advertisements in preference to Internal sources, with the respective mean service periods being 2.02 and 8.64 years. The fifth organisation preferred to use the The Department of Employment/Job Centre which gave a mean service period value significantly lower than the value given by the 'better' source, Casual Call In (1.42 and 18.43 years, respectively).

Statistical analysis of the data by means of the ONE-WAY Analysis of Variance supports the initial findings regarding the usage of the recruitment sources within the individual organisations, indicating those sources which give significantly different values from the other sources of recruitment. The TWO-WAY Analysis of Variance markedly highlights the significance of the differences in mean lengths of service given by each of the 2449 recruits from the individual sources of recruitment utilised in the composite study. It also highlights the importance of considering the organisation type in relation to the sources of recruitment utilised, since there was significant interaction between these two possible sources of variation.

The in-house preferred sources of recruitment may be seen as a back-up to the sources indicated as the 'better' performers, but generally produced the poorer values in terms of service length and quit rates and therefore are to be avoided if possible. Stemming from analysis of these results it is argued that substantial organisational resources may be being committed towards the use of recruitment sources which at best prove only marginally useful, and at worst are a drain or hindrance on the efficient operation of the organisation.

Turnover of the employee cohort has significant effects upon the organisation as a whole, with these effects being described and discussed in some detail in Chapter 5. The complexity of these ramifications demands that management give considerable attention to their nature and to the potential benefits or negative effects which may arise from the turnover. None of the organisations had given in-depth consideration to the fuller ramifications of employee turnover upon the organisation, the employees remaining within particular cohorts and the industry generally.

The rate of turnover may or may not fall within acceptable boundaries and therefore be perceived as either negative or positive by the management of the organisation. The levels of turnover for each organisation were examined and Quit Rates established and related to the source of recruitment used in recruitment of the employee. From this examination and subsequent analysis it is evident that particular sources of recruitment are strong indicators of employees who are likely to remain with the organisation. The values established for each source of recruitment clearly indicating the source which exhibits high quit rates and those sources which have low quit rates. The individual organisation's preferred sources of recruitment, used to secure the human resources, have been shown to be less effective in predicting stability of the employee.

10.2 ACHIEVEMENTS OF THE RESEARCH

At the outset of the research four hypotheses were clearly laid out and discussion follows on the support given to each of these hypotheses i.e.:

Hypothesis A:
That the use of particular recruitment sources will result in an organisation recruiting employees who remain with the organisation for significantly longer periods of time.

The data analysed within the research and the results clearly support this hypothesis. Significantly longer periods of employment were found for employees recruited by

particular sources within each of the organisations. Each organisation was found to have its own preferred 'in-house' source of recruitment which gave lengths of service which fell below the period of service to be found when recruits were secured by the source seen within the research as the 'better' source. Therefore the organisation may be seen to be failing to maximise the opportunity presented to it, and inappropriately applying managerial resources by not securing employees from the 'better' source.

Hypothesis B:
That the use of certain recruitment sources will result in employee cohorts whose turnover rates are more manageable.

This hypothesis is clearly supported by the research. Turnover rates for all employees from all recruitment sources were established and compared with the 'better' source's turnover rate. From this analysis it is clear that employees entering the organisation within specific recruitment source groups lead to lower turnover rates and so demand less managerial input into control of turnover. The concentration on particular recruitment sources may allow management to re-focus much of the managerial effort towards areas more productive for the organisation.

Hypothesis C:
That the use of certain recruitment sources will improve the overall effectiveness of the recruitment practices and procedures carried out within the organisation.

The research provides substantial support for this hypothesis. Consideration of the many factors at work within the recruitment practices and procedures shows that focusing of the efforts may lead to substantial improvements in the recruitment function. Resources may be channelled to a specific source of recruitment which is shown to be more effective, thus improving utilisation of the resources. Management will be better able to develop, implement, monitor and control the overall function of recruitment ensuring that future recruitment strategies may be better prepared and implemented

Hypothesis D:
That employees joining or leaving the organisation will have significant effects on other employees, and the organisation generally.

The research has considered a broad spectrum of ramifications from employee turnover and, in conjunction with the available literature, shown the potential outcomes from employee turnover. There is clear support for the hypothesis with substantial evidence of the effects on both the employee and the organisation.

Generally within the research there is substantial support for the four hypotheses stated and considered. Thus the research findings are seen to validate the research effort.

Also stated at the outset of the research were three objectives:

i) To investigate recruitment sources used by construction organisations and to deduce if any of the recruitment sources used may act as an aid in improving the recruitment process as a function of the construction industry; and,

ii) to consider and summarise the effects of employee turnover upon the organisation, and the use of each recruitment source, especially those which may serve as indicators of long term employee tenure within the organisation; and,

iii) to consider the hypotheses stated and provide substantive data and findings which may be replicated and/or expanded by others at a later date.

It has been shown that objectives i) and ii) have been achieved through the formation and development of a specific model which encompasses the use of the various sources of recruitment and shows how these recruitment sources interact with the other processes and functions of recruitment (Figure 6.3). The model clearly demonstrates that the recruitment source used may be subject to influence from the recruitment practices adopted and may in turn influence such areas as: image of the organisation (which may be a two-way flow), the source effectiveness, vacancy information passed to potential applicants, perceived desirability of the vacancy, the employee cohort who respond to the vacancy information and ultimately, the actual length of service period given by recruits and the wider effects of labour turnover

upon the organisation. The data gathered and analysed has provided considerable statistical support for the work in general, and specifically for the particular recruitment sources used by the organisations. Whilst the participating organisations have been relatively few in number the research, nonetheless, is shown to be valid, replicable, and offering a significant contribution to the knowledge surrounding the use of recruitment sources within various construction industry organisations.

The ramifications of labour turnover have been mapped together in order to provide the reader with a concise summary of the likely outcomes. Whilst all of the outcomes may not be seen within an organisation, it is clear from the work that the organisation will witness some of the outcomes. Whether the outcomes seen are considered beneficial or not is a matter for the organisation and the individual concerned.

10.3 IMPLICATIONS AND APPLICATIONS OF THE RESEARCH

Recruitment practices are a vital component within the overall management of an organisation and the findings from this research may be utilised by those in construction management to improve the general recruitment process. The reduction in time and resources expended on sources of recruitment which are inefficient along with the greater accuracy in the recruitment process must prove beneficial to the organisation. The ability to say with some degree of confidence that an employee, recruited from a particular source, is likely to remain within the organisation for a period of time which falls within acceptable boundaries allows management to plan more accurately for their output demands and human resource needs. This confidence coming about through careful analysis of in-house records which show recruitment sources used and lengths of service derived.

Implications for management and the industry as a whole may be considered under three broad heads: Precision and accuracy, Cost effectiveness, and Application.

- The analysis of in-house human resource records which have been regularly updated and well maintained should ensure that the data extracted from the files is precise, in that it relates to a specific organisation and source of recruitment; the accuracy is ensured by the regular monitoring of the processes involved in the record maintenance. Indeed the regular monitoring of the recruitment sources used and their various success rates provides valuable feedback to management which enables the focusing on specific sources which are better performers. The participating organisations as a whole lacked any co-ordinated approach to which recruitment sources were to be used in seeking recruits. Most used an ad-hoc basis for establishing which source to use, and even this basis was subject to the whims of the individual who was given the responsibility of executing the particular task. The issue of who was given the task of using the appropriate recruitment source appeared to rely on the principle that the youngest, and generally the least experienced, member of staff would be more than capable of carrying out this 'mundane' task. Greater understanding and awareness of those instigating the use of various recruitment sources is required. Improved training in the allocation/application of particular sources is required in order to highlight the full impact of the chosen recruitment source upon the organisation.

- The records themselves were lacking in coherence. Each organisation adopted an in-house style which may have come about simply through an individual's personal whims and tastes. Whilst there were organisations which had Personnel Officers who had formal Personnel Management qualifications, this made little impact on the 'personal factor'. The Personnel Manager being seen more as the Legislation Interpreter and Enforcer rather than a true Manager. New Technology is readily available which should be employed and would take much of the routine, mundaneness, out of personnel records management. None of the organisations applied New Technology to their specific personnel records: IT was in use in other areas of the organisation, even within personnel departments e.g. word-processing. Standardisation of approaches, documentation, procedures, practices and technology

employed has many implications for the organisations concerned and may well be an issue to be addressed at professional, academic, and industry levels.

- Generally it would appear from the records made available in all the participating organisations that personnel management is still somewhat of a 'hit and miss' affair with the particular aspects of this research being much too deep in the subject area for general management's consideration. Only when the full ramifications of labour turnover are illustrated is there a sudden glimmer of interest, especially when 'savings to be made' are mentioned. The organisations were unable to quantify the overall cost incurred when recruiting an employee. Given that in many instances the employee may be part of a larger work unit which must be employed e.g. a design team, a bricklaying squad, then it would appear sound commercial sense that the costs involved are readily known and available. The implications arising from the lack of precise cost control are well known to managers operating within the construction industry.

- None of the organisation's records showed any attempt at 'exit interviews'. Therefore in many instances the organisations had no ideas whatsoever of why the employee was leaving. The issue of exit interviews impinges on the whole concept of employee motivation. The data available in the records would suggest that the organisations are simply viewing the individual employee as a 'work unit' which can be replaced as and when required. Productivity is certainly considered when reference is made to bonus payments on the data records, but bonus payments are only one small area of the wider issue. The issues surrounding motivation and productivity as related to those who work within the construction industry, should be considered on an industry specific basis, and further, on an organisational type basis.

- Application of the analytical technique shown within this thesis is relatively straightforward, especially where there is an abundance of computing power. The data required may already be available within the organisation's records or database

and simply requires extraction and suitable processing. Alternatively, to implement the process manually requires no more than a methodical approach to record keeping. With the introduction of suitable IT and Databases, then the costs involved in actually analysing the data becomes relatively small, whilst the potential benefits derived from the introduction of the analysis may be immense e.g. reduction in advertising costs, reduced repetition of training of new recruits, controlled turnover rates, enhanced external image, etc.

- The length of service has been shown to be related to the source of recruitment used and it may therefore be possible to develop an algorithm which expresses this relationship numerically i.e. $Ls = Rsm +/- C$.

> where Ls = length of service expected, Rsm = mean length of service from each source of recruitment, and C = a constant derived from other factors which may influence the length of service e.g. the individuals motivational state, the organisation's geographical location, and the job vacancy itself.

This algorithm can be used as a ready indicator for the organisation's recruiters. The ability to focus on specific sources of recruitment which are indicators of better performance, in clearly defined terms of reference, ensures that the organisation directs maximum attention to the better source.

- With wider application of the analysis of recruitment sources and resulting employee turnover it may be that the recruitment process is enhanced, that organisational efficiency is improved and that organisational costs incurred in recruitment are reduced.

The overall process of considering the recruitment source utilised and the resulting turnover is one which may be applied to all construction organisations, irrespective of their size, geographical location or work area, as an integral element within their recruitment process. The narrative and analysis of the data contained within this thesis has shown the need to better understand the recruitment process and where possible to assist the successful application of the process by means of appropriate

management tools. The analysis of recruitment sources is one such tool and is readily followed by the user.

The process should not only be limited to application within the construction industry but also applied over the wider industrial organisational base existing in the nation. The type of organisation or work undertaken may be held as being irrelevant to the process, the important aspects being correct and accurate data maintenance along with suitable extraction and processing of the data.

10.4 RECOMMENDATIONS FOR FUTURE RESEARCH

Many aspects of the research are worthy of future consideration in their own right e.g. the influence of group demographics on the service periods and also upon quit rates. However, areas put forward for future research should perhaps be seen as not only complementary to the initial work, but also adding to the depth of the subject and allowing further developments to take place. The following areas are put forward as suggestions for others to actively pursue in order to take the research on to new depths and to allow those who follow to develop the subject into a widely acknowledged area for advancement and application: Approaches to Recruitment Sources, Recruitment Costs, Employee Motivation, Wider Use of the Model.

- The research has shown biases within the organisations, and also the recruitment sources, towards certain clearly defined age groups. The question arises as to how influential the demographics of each group are in moderating the effectiveness of each source of recruitment and whether any such derivative influence may be isolated and/or manipulated?

- The individuals who respond to job vacancies bring with them many traits, beliefs, goals and values. The analysis of the impact of these aspects upon the individual and upon the source of recruitment utilised, and the inclusion of many of these aspects within job vacancy information may further enlighten the exact nature of the process

and so allow modification of its application.

- Analysis of organisational data with regard to specific occupations and sources of recruitment utilised by applicants and organisations may lead to a honing of the process, thus allowing precision targeting of applicable sources to specific occupations.

- The research methodology should be applied to other organisations outwith the construction industry in order to fully validate the findings and also to provide a wider analysis of the recruitment sources used, along with the various quit rates found in other industries. Particular emphasis may be placed on the interaction between organisation type and the particular sources of recruitment utilised in order to ascertain the full impact of this interaction.

APPENDIX 1

ORGANISATION RESPONSES

Organisation Description	Response
National Contractor	referred to local office resulting in the following: "You will appreciate that I have a duty of confidentiallity to the staff we employ and could not allow someone from outside the company access to their records".
UK-wide contractor	"We are an enormous organisation operating through a multiplicity of smaller business units, rendering the task of retreiving the information you require extrememly time consuming".
Local component manufacturer	"We are a relatively small company with the minimum of personnel records and I am not sure that we would be in a position to give you all the detailed information which you require".
Project Managers	positive input
Local component manufacturer	positive input
National contractor	"We are unable to assist you in this matter".
National contractor	no response
Surveyors	positive input
Consulting Engineers	initially positive then conditional
Local Authority Building & Works	positive input
Ancillary services	positive input
UK-wide house builder	no response
Localised contractor	no response
UK-wide contractor and house builder	"We are unable to commit resources to such work".

APPENDIX 2

RAW DATA

Organisation No1	Sex	Numbr	Source	Date started	Date left	Lngth of Serv in weeks	Lngth of Serv in months	Lngth of Serv in years	Occupation	Date of Birth	Qualifications	Age at start years-m
						0.00	0.00	0.00				00-1
	f	15	letter	1-Aug-89	1-Jun-92	147.86	34.50	2.84	asst projman	8-Feb-59	BSc ARICS	30-6
	m	2	advert	1-Apr-88	1-Jun-92	217.43	50.73	4.17	proj man	1-Mar-54	MSc FCIOB	34-1
	f	15	letter	13-Nov-89	1-Jun-92	133.00	31.03	2.55	admin	30-Jan-53	nil	36-10
	m	2	advert	13-Nov-89	1-Jun-92	133.00	31.03	2.55	proj man	13-Mar-60	BSc ARICS	29-9
	m	2	advert	25-May-88	1-Jun-92	209.71	48.93	4.02	plan man	7-Feb-62	MCIOB DConM	26-4
	m	6	referred	16-Mar-90	1-Jun-92	115.43	26.93	2.21	proj man	22-Jun-58	ARICS	31-9
	m	2	advert	1-Dec-90	1-Jun-92	78.29	18.27	1.50	proj man	7-Oct-51	FRICS	39-2
	f	15	letter	1-May-90	1-Jun-92	108.86	25.40	2.09	receptnst	26-Oct-69	nil	20-7
	f	1	advert	1-Apr-91	1-Jun-92	61.00	14.23	1.17	receptnst	12-Jan-62	nil	29-3
	m	2	advert	1-Dec-90	31-May-91	25.86	6.03	0.50	proj man	7-Aug-50	BSc MCIOB	40-4
	m	2	advert	15-Jun-90	31-Aug-90	11.00	2.57	0.21	asstprojman	22-Jul-65	MSc ARICS	24-11
	f	6	referred	28-May-90	20-Sep-90	16.43	3.83	0.32	recp/typ	13-Mar-64	nil	26-3
	f	6	referred	6-Jan-90	31-May-90	20.71	4.83	0.40	recp/typ	12-Feb-71	nil	18-11
	m	2	advert	1-Sep-86	1-Jun-92	300.00	70.00	5.75	app qs	3-Jan-67	partARICS	19-8
	m	2	advert	1-Jul-77	1-Jun-92	778.43	181.63	14.93	qs	26-May-55	ARICS	22-2
	m	3	advert	1-Jul-76	1-Jun-92	830.57	193.80	15.93	qs	7-Nov-53	ARICS	22-8
	m	3	advert	1-Jun-81	1-Jun-92	574.00	133.93	11.01	qs	24-Mar-60	BSc ARICS	21-3
	m	15	letter	1-Jan-87	1-Jun-92	282.57	65.93	5.42	qs	23-Feb-52	ARICS	34-11
	m	3	advert	1-May-72	1-Jun-92	1048.00	244.53	20.10	qs	28-Apr-46	ARICS	26-1
	m	3	advert	1-Jun-74	1-Jun-92	939.29	219.17	18.01	qs	24-Mar-52	FRICS	22-3
	m	3	advert	1-Aug-86	1-Jun-92	304.43	71.03	5.84	qs	17-Nov-65	ARICS	20-9
	m	3	advert	1-Jun-74	1-Jun-92	939.29	219.17	18.01	qs	18-Mar-52	ARICS	22-3
	m	3	advert	1-Jul-79	1-Jun-92	674.14	157.30	12.93	qs	5-Jan-57	ARICS	22-6
	m	3	advert	1-Sep-83	1-Jun-92	456.57	106.53	8.76	qs	8-Dec-65	partARICS	17-9
	m	3	advert	1-Apr-75	1-Jun-92	895.86	209.03	17.18	qs	21-Jul-52	FRICS	22-9
	m	15	letter	1-Apr-88	1-Jun-92	217.43	50.73	4.17	qs	7-Apr-57	ARICS	30-12
	m	2	advert	1-May-88	1-Jun-92	213.14	49.73	4.09	qs	31-Oct-59	ARICS	28-7

	m	1	advert	1-Sep-88	1-Jun-92	195.57	45.63	3.75	technician	5-May-70	nil	18-4
	m	9	college	1-Oct-88	1-Jun-92	191.29	44.63	3.67	qs	27-Jun-66	BSc ARICS	22-4
	m	1	advert	1-Feb-89	1-Jun-92	173.71	40.53	3.33	qs	29-Jul-57	ARICS	31-7
	m	9	college	1-Jul-89	1-Jun-92	152.29	35.53	2.92	qs	8-Feb-67	BSc ARICS	22-5
	f	9	college	1-Aug-89	1-Jun-92	147.86	34.50	2.84	qs	31-Mar-68	BSc ARICS	21-5
	m	1	advert	1-Nov-89	1-Jun-92	134.71	31.43	2.58	qs	14-Feb-63	BSc ARICS	26-9
	m	1	advert	1-Nov-89	1-Jun-92	134.71	31.43	2.58	technician	4-Feb-72	nil	17-9
	m	1	advert	1-Feb-90	1-Jun-92	121.57	28.37	2.33	qa manager	7-Dec-34	nil	55-2
	m	6	referred	1-Jul-90	1-Jun-92	100.14	23.37	1.92	qs	24-Jan-62	BSc ARICS	28-6
	m	6	referred	1-Sep-90	1-Jun-92	91.29	21.30	1.75	comput mngr	12-Dec-62	nil	27-9
	f	2	advert	1-Jun-66	1-Jun-92	1356.71	316.57	26.02	receptnst	6-Jul-39	nil	26-11
	f	6	referred	1-Feb-77	1-Jun-92	799.86	186.63	15.34	finance admin	3-Jun-46	nil	30-8
	f	2	advert	1-Apr-80	1-Jun-92	634.86	148.13	12.18	secretary	27-Jun-59	nil	20-10
	f	4	agency	1-Aug-88	1-Jun-92	200.00	46.67	3.84	wp op	23-Mar-71	nil	17-5
	f	15	unknown	1-Feb-90	1-Jun-92	121.57	28.37	2.33	typist	5-Apr-73	nil	16-10
	m	2	advert	1-Aug-85	1-Aug-90	260.86	60.87	5.00	qs	14-Dec-63	BSc ARICS	21-8
	m	2	advert	1-Nov-88	1-Sep-91	147.71	34.47	2.83	qs	18-May-60	BSc ARICS	28-6
	m	6	referred	1-Feb-87	1-Aug-91	234.57	54.73	4.50	qs	10-Oct-62	BSc ARICS	24-4
	m	3	advert	1-Oct-88	1-Sep-91	152.14	35.50	2.92	qs	3-Oct-66	BSc ARICS	21-12
	m	9	college	1-Aug-89	1-Sep-91	108.71	25.37	2.08	qs	19-Aug-67	BSc ARICS	21-12
	m	9	college	1-Feb-90	1-Sep-91	82.43	19.23	1.58	qs	19-Oct-60	BSc ARICS	29-4
	m	2	advert	1-Dec-86	1-Sep-91	247.86	57.83	4.75	technician	21-Jun-69	nil	17-6
	f	4	agency	1-May-89	1-Aug-91	117.43	27.40	2.25	wp op	12-Dec-65	nil	23-5
	f	1	advert	1-Mar-90	1-Aug-91	74.00	17.27	1.42	wp op	16-Oct-67	nil	22-5
	f	1	advert	1-Oct-89	1-Aug-91	95.57	22.30	1.83	comp op	3-Jan-45	nil	44-9

Organisation No2	Sex	Numbe	Source	Date started	Date left	Lngth of Serv in weeks	Lngth of Serv in months	Lngth of Serv in years	Occupation	Date of Birth	Qualifications	Age at start years-m
	m	15		10-Jun-91	13-Sep-91	13.57	3.17	0.26	grounds	23-Jun-72	nil	18-12
	m	13		30-Apr-64	3-Dec-91	1439.71	335.93	27.61	builder	15-May-31	nil	32-12
	m	2		11-Mar-91	13-Sep-91	26.57	6.20	0.51	joiner	6-Oct-59	c&g	31-6
	m	6		18-Feb-91	21-Jan-92	48.14	11.23	0.92	painter	4-Mar-50	c&g	40-12
	m	13		4-Aug-91	11-Dec-91	18.43	4.30	0.35	grounds	25-Jun-52	nil	39-2
	m	15		8-May-90	18-Oct-91	75.43	17.60	1.45	driver	7-Jan-63	hgv	27-5
	m	15		13-Mar-78	21-Oct-91	710.00	165.67	13.62	labour	22-Oct-26	nil	51-5
	m	15		2-Nov-90	6-Sep-91	44.00	10.27	0.84	grounds	27-Oct-49	nil	41-1
	m	13		11-Jan-54	6-Nov-91	1973.29	460.43	37.84	joiner	19-Dec-30	c&g	23-1
	m	15		18-Nov-91	3-Jan-92	6.57	1.53	0.13	joiner	20-Sep-48	c&g	43-2
	m	7		16-Apr-79	18-Nov-91	657.00	153.30	12.60	joiner	10-Jan-29	c&g	50-4
	m	7		1-Sep-75	18-Jul-91	828.43	193.30	15.89	woodm	25-Feb-59	c&g	16-7
	m	15		9-Jun-75	9-Dec-91	861.00	200.90	16.51	mechanic	27-Jul-32	c&g	42-11
	m	15		12-Jun-78	6-Jan-92	708.00	165.20	13.58	painter	12-Apr-49	c&g	29-3
	m	8		3-Aug-87	6-Sep-91	213.57	49.83	4.10	plaster	29-Jun-71	o grade	16-2
	f	15		3-Jun-91	30-Aug-91	12.57	2.93	0.24	grounds	16-Feb-72	nil	19-4
	m	14		19-Mar-84	6-Sep-91	389.57	90.90	7.47	roofer	28-Sep-59	c&g	24-6
	m	15		3-Jun-91	22-Nov-91	24.57	5.73	0.47	grounds	21-May-71	nil	20-1
	m	8		31-May-81	23-Aug-91	533.71	124.53	10.24	heat eng	25-Oct-70	o grade	10-8
	m	13		18-Oct-48	18-Nov-91	2248.00	524.53	43.11	plumb	5-Jun-27	c&g	21-5
	m	2		18-Mar-91	13-Sep-91	25.57	5.97	0.49	plumb	20-Jul-55	c&g	35-8
	m	14		30-Sep-91	18-Nov-91	7.00	1.63	0.13	brickl	4-Feb-45	c&g	46-8
	m	8		14-Aug-89	25-Oct-91	114.57	26.73	2.20	plumb	19-Apr-73	o grade	16-4
	m	13		7-May-84	18-Nov-91	393.00	91.70	7.54	labour	6-Aug-27	nil	56-10
	m	6		15-Oct-90	6-Dec-91	59.57	13.90	1.14	painter	13-Aug-41	c&g	49-3
	m	7		10-Jun-91	20-Sep-91	14.57	3.40	0.28	grounds	3-Dec-72	h grade	18-7
	m	15		11-Sep-78	26-Apr-91	658.57	153.67	12.63	joiner	22-Nov-28	c&g	49-10
	m	14		1-Feb-82	9-Dec-91	514.00	119.93	9.86	scaffold	11-Jan-42	nil	40-1
	m	15		18-Aug-80	5-Nov-91	585.14	136.53	11.22	joiner	13-Aug-35	c&g	45-1
	m	10		18-Mar-91	30-Aug-91	23.57	5.50	0.45	brickl	20-Jul-70	c&g	20-8
	m	8		3-Aug-87	27-Feb-91	186.29	43.47	3.57	joiner	3-Mar-71	o grade	16-6
	m	7		27-Nov-89	16-Jul-91	85.14	19.87	1.63	elect	2-Feb-58	c&g	31-10
	m	15		16-Aug-76	10-May-91	768.57	179.33	14.74	joiner	27-Oct-59	o grade	16-10
	m	2		23-Apr-90	30-Aug-91	70.57	16.47	1.35	brickl	16-Jan-66	c&g	24-4
	m	2		24-Jun-88	16-Aug-91	164.00	38.27	3.15	brickl	10-Jul-68	c&g	19-12

	m	15		1-Dec-75	15-Jul-91	815.00	190.17	15.63	plumb	3-Jun-54	c&g	21-6
	f	15		19-Jun-91	13-Sep-91	12.29	2.87	0.24	grounds	23-Aug-71	nil	19-10
	m	15		24-Jun-91	30-Aug-91	9.57	2.23	0.18	grounds	23-Mar-71	nil	20-4
	m	15		10-Jun-91	27-Sep-91	15.57	3.63	0.30	grounds	25-Apr-72	nil	19-2
	m	13		5-Apr-71	5-Aug-91	1061.00	247.57	20.35	joiner	6-Aug-26	c&g	44-8
	m	1		29-Jul-91	30-Aug-91	4.57	1.07	0.09	brickl	30-Apr-37	c&g	54-3
	m	10		1-Jul-91	6-Sep-91	9.57	2.23	0.18	grounds	27-Apr-50	nil	41-3
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	grounds	21-Nov-71	nil	19-8
	m	15		1-Jul-91	4-Oct-91	13.57	3.17	0.26	plumb	10-Jun-52	c&g	39-1
	m	7		24-Jun-91	20-Sep-91	12.57	2.93	0.24	gard	24-Mar-67	nil	24-4
	m	13		5-May-87	21-May-91	211.00	49.23	4.05	plaster	12-Aug-61	c&g	25-9
	m	15		1-Jul-91	6-Sep-91	9.57	2.23	0.18	plumb	26-Jul-43	c&g	47-12
	m	13		1-Feb-88	25-Mar-91	164.00	38.27	3.15	painter	24-Jan-57	c&g	31-1
	m	10		10-Jun-91	16-Aug-91	9.57	2.23	0.18	brickl	12-Sep-67	c&g	23-9
	m	10		13-Apr-82	16-Apr-91	470.00	109.67	9.01	gard	7-Jul-31	nil	50-10
	f	10		3-Jun-91	2-Aug-91	8.57	2.00	0.16	grounds	6-Sep-69	nil	21-9
	m	15		3-Jun-91	16-Aug-91	10.57	2.47	0.20	grounds	1-Jan-75	nil	16-6
	m	10		29-Feb-88	22-May-91	168.29	39.27	3.23	brickl	18-Aug-67	c&g	20-7
	m	10		18-Mar-91	22-Mar-91	0.57	0.13	0.01	brickl	10-Jul-53	c&g	37-9
	m	7		13-Jan-88	15-Feb-91	161.29	37.63	3.09	grounds	8-Dec-57	nil	30-2
	m	13		20-Sep-71	28-Aug-91	1040.29	242.73	19.95	charge	2-Sep-32	nil	39-1
	m	10		3-Jun-91	6-Sep-91	13.57	3.17	0.26	grounds	10-Jan-73	nil	18-5
	m	6		13-May-91	13-Sep-91	17.57	4.10	0.34	joiner	20-Jul-68	c&g	22-10
	m	15		1-Jul-91	30-Aug-91	8.57	2.00	0.16	grounds	13-Sep-70	nil	20-10
	m	10		8-Aug-81	7-Jun-91	512.86	119.67	9.84	painter	8-Aug-65	o grade	15-12
	m	8		2-Jul-90	22-Apr-91	42.00	9.80	0.81	painter	1-Dec-73	o grade	16-7
	m	15		16-Oct-78	12-Mar-91	647.14	151.00	12.41	grounds	25-Nov-52	nil	25-11
	m	15		1-Jul-91	6-Sep-91	9.57	2.23	0.18	plumb	1-Dec-68	c&g	22-7
	m	13		5-Dec-66	3-Sep-91	1291.14	301.27	24.76	elect	26-Nov-35	c&g	31-1
	m	8		14-Aug-89	21-Jun-91	96.57	22.53	1.85	joiner	5-Mar-73	o grade	16-6
	m	13		25-Mar-91	6-May-91	6.00	1.40	0.12	joiner	17-Nov-46	c&g	44-5
	m	1		18-Feb-91	18-Oct-91	34.57	8.07	0.66	joiner	25-Feb-63	o grade	27-12
	m	15		1-Jul-91	13-Sep-91	10.57	2.47	0.20	groub=nds	24-May-73	nil	18-2
	m	15		10-Jun-91	16-Aug-91	9.57	2.23	0.18	grounds	24-Jan-73	nil	18-5
	m	6		1-Oct-90	25-Jan-91	16.57	3.87	0.32	painter	10-Aug-61	c&g	29-2
	m	13		12-Mar-79	19-Mar-91	627.14	146.33	12.03	driver	2-Jan-28	nil	51-3
	m	8		2-Jul-90	24-Jul-91	55.29	12.90	1.06	brickl	1-Nov-72	o grade	17-8

	m	13		26-Feb-68	20-Sep-91	1229.57	286.90	23.58	labour	24-Feb-46	nil	22-1
	m	15		1-Jul-91	29-Aug-91	8.43	1.97	0.16	grounds	16-Jun-72	nil	19-1
	m	1		14-Jan-91	5-Apr-91	11.57	2.70	0.22	joiner	21-Jun-48	c&g	42-7
	m	7		8-Nov-82	31-Jul-91	455.29	106.23	8.73	charge	23-Feb-32	nil	50-9
	m	10		10-Jun-91	16-Aug-91	9.57	2.23	0.18	brickl	30-Mar-63	c&g	28-3
	m	2		24-Jun-91	13-Sep-91	11.57	2.70	0.22	plumb	26-Jun-53	c&g	37-12
	m	10		1-Jul-91	27-Sep-91	12.57	2.93	0.24	grounds	22-Sep-72	nil	18-10
	m	8		2-Jul-90	7-Jun-91	48.57	11.33	0.93	joiner	12-Feb-74	o grade	16-5
	m	2		11-Mar-91	20-Nov-91	36.29	8.47	0.70	elect	29-May-64	c&g	26-10
	m	15		3-Jun-91	6-Sep-91	13.57	3.17	0.26	grounds	2-Feb-71	nil	20-4
	m	6		18-Feb-91	7-Jun-91	15.57	3.63	0.30	joiner	27-Dec-50	c&g	40-2
	m	13		25-Nov-68	4-Feb-91	1158.00	270.20	22.21	roofer	12-Jul-43	c&g	25-5
	m	2		11-Mar-91	28-Jun-91	15.57	3.63	0.30	elect	28-Jul-40	c&g	50-8
	m	2		2-Apr-91	6-Jun-91	9.29	2.17	0.18	plaster	2-Oct-58	c&g	32-6
	m	2		15-Apr-91	6-Jun-91	7.43	1.73	0.14	plaster	9-Jul-52	c&g	38-10
	m	2		11-Feb-91	16-Aug-91	26.57	6.20	0.51	joiner	19-Jan-57	c&g	34-1
	m	15		24-Jun-91	6-Sep-91	10.57	2.47	0.20	plumb	6-Jan-51	c&g	40-6
	m	2		27-Feb-91	5-Apr-91	5.29	1.23	0.10	elect	11-May-63	c&g	27-10
	m	15		10-Jun-91	16-Aug-91	9.57	2.23	0.18	labour	7-Jun-65	nil	26-1
	m	2		8-Jul-91	16-Aug-91	5.57	1.30	0.11	labour	16-May-63	nil	28-2
	m	2		8-Jul-91	16-Aug-91	5.57	1.30	0.11	brickl	13-Apr-68	c&g	23-3
	m	2		18-Feb-91	17-Sep-91	30.14	7.03	0.58	roofer	18-Jan-63	c&g	28-1
	m	2		1-Jul-91	13-Sep-91	10.57	2.47	0.20	plaster	7-Feb-59	c&g	32-5
	m	1		14-Jan-91	5-Apr-91	11.57	2.70	0.22	joiner	17-Aug-70	c&g	20-5
	m	2		24-Jun-91	13-Sep-91	11.57	2.70	0.22	plumb	19-May-48	c&g	43-2
	m	8		13-Aug-84	8-Feb-91	338.57	79.00	6.49	joiner	1-Jul-68	o grade	16-2
	m	10		9-Jan-79	29-Apr-91	641.86	149.77	12.31	elect	8-Feb-51	c&g	27-12
	m	10		11-Aug-86	27-Aug-91	263.14	61.40	5.05	plumb	21-Sep-68	o grade	17-11
	m	14		22-Jul-91	6-Sep-91	6.57	1.53	0.13	brickl	31-Mar-35	c&g	56-4
	m	15		10-Jun-91	13-Sep-91	13.57	3.17	0.26	gard	3-Sep-70	nil	20-10
	m	6		4-Feb-84	2-Dec-91	408.29	95.27	7.83	driver	9-Apr-63	nil	20-10
	m	15		22-Jul-91	6-Sep-91	6.57	1.53	0.13	gard	26-Feb-71	nil	20-5
	m	6		7-Nov-83	20-Aug-91	406.14	94.77	7.79	joiner	5-Mar-29	c&g	54-9
	m	14		1-Jul-91	13-Sep-91	10.57	2.47	0.20	roofer	28-Aug-67	nil	23-11
	m	15		1-Jul-91	30-Aug-91	8.57	2.00	0.16	grounds	21-Sep-73	nil	17-10
	m	13		16-May-75	12-Jul-91	843.00	196.70	16.17	charge	6-Dec-49	nil	25-6
	m	15		22-Jul-91	6-Sep-91	6.57	1.53	0.13	gard	3-Mar-73	nil	18-5

	m	15		24-Jun-91	16-Aug-91	7.57	1.77	0.15	grounds	16-Apr-73	nil		18-3
	m	6		1-Jul-91	6-Sep-91	9.57	2.23	0.18	grounds	4-Sep-70	nil		20-10
	m	15		3-Jun-91	13-Sep-91	14.57	3.40	0.28	gard	10-Oct-73	nil		17-8
	m	13		4-Aug-71	20-May-91	1032.71	240.97	19.81	roofer	27-Feb-29	c&g		42-6
	f	15		3-Jun-91	6-Sep-91	13.57	3.17	0.26	grounds	20-Aug-73	nil		17-10
	m	15		24-Jun-91	25-Sep-91	13.29	3.10	0.25	gard	10-Dec-72	nil		18-7
	m	15		10-Jun-91	20-Sep-91	14.57	3.40	0.28	gard	15-Jan-72	nil		19-5
	m	10		3-Aug-87	15-Feb-91	184.57	43.07	3.54	painter	23-Aug-71	o grade		15-12
	m	10		24-Jun-91	6-Sep-91	10.57	2.47	0.20	grounds	25-Jul-74	nil		16-11
	m	8		8-Aug-88	4-Oct-91	164.57	38.40	3.16	roofer	13-May-72	o grade		16-3
	m	15		1-Jul-91	20-Sep-91	11.57	2.70	0.22	grounds	12-Jun-73	nil		18-1
	m	7		5-May-87	30-Jan-91	195.14	45.53	3.74	grounds	11-Dec-63	nil		23-5
	m	10		2-Jul-91	23-Aug-91	7.43	1.73	0.14	grounds	9-Sep-72	nil		18-10
	m	8		13-Aug-84	3-May-91	350.57	81.80	6.72	painter	30-Apr-68	o grade		16-4
	f	9		23-Mar-87	22-Sep-87	26.14	6.10	0.50	surv	18-Aug-62	degree		24-8
	m	9		8-Sep-86	5-Jun-88	90.86	21.20	1.74	qs	27-Oct-64	degree		21-11
	m	13		4-Dec-67	24-Mar-78	537.57	125.43	10.31	admin	5-Dec-29	nil		37-12
	m	13		1-Aug-49	8-Dec-81	1688.14	393.90	32.38	esti	1-May-26	nil		23-4
	f	15		16-Jun-75	17-Oct-75	17.57	4.10	0.34	clerkess	1-Oct-41	nil		33-9
	m	14		23-May-77	3-Mar-87	510.14	119.03	9.78	clerk	29-Nov-35	nil		41-6
	f	15		19-Dec-77	17-Mar-78	12.57	2.93	0.24	clerkess	22-Oct-56	nil		21-2
	m	13		6-Jan-66	14-May-76	540.14	126.03	10.36	esti	10-Oct-49	nil		16-3
	f	13		26-Aug-74	11-May-75	36.86	8.60	0.71	typist	19-Sep-38	nil		35-12
	f	14		11-Feb-85	3-Nov-85	37.86	8.83	0.73	clerkess	9-Jun-47	nil		37-9
	m	13		16-May-27	5-Aug-73	2411.86	562.77	46.25	manager	6-Aug-08	nil		18-10
	f	13		4-Jul-77	4-Jun-78	47.86	11.17	0.92	clerkess	19-Jul-22	o grade		54-12
	m	13		4-Feb-59	31-May-87	1477.57	344.77	28.34	charge	24-Aug-32	c&g		26-6
	m	15		1-Dec-78	12-May-89	545.00	127.17	10.45	surv	3-Mar-29	nil		49-9
	m	13		22-Oct-73	11-May-78	237.43	55.40	4.55	clerk	24-Jan-21	nil		52-9
	f	13		29-Oct-74	18-May-75	28.71	6.70	0.55	clerkess	2-Jun-50	nil		24-5
	m	13		17-May-71	4-Jan-74	137.57	32.10	2.64	clerk	19-Nov-54	nil		16-6
	m	11		24-Aug-87	4-Dec-87	14.57	3.40	0.28	clerk	29-Aug-70	o grade		16-12
	m	13		8-May-72	31-Oct-73	77.29	18.03	1.48	esti	3-Feb-40	nil		32-4
	f	1		19-Jun-78	3-Jun-79	49.86	11.63	0.96	clerkess	30-Jul-55	nil		22-11
	m	15		14-Jul-75	13-Sep-85	530.57	123.80	10.18	manager	14-Sep-20	nil		54-10
	f	14		13-May-85	13-Sep-85	17.57	4.10	0.34	esti	14-Jul-65	o grade		19-10
	f	14		9-Oct-78	7-Nov-78	4.14	0.97	0.08	clerkess	8-Oct-41	nil		36-12

	f	10		20-Oct-75	11-Oct-81	311.86	72.77	5.98	clerkess	17-Jun-53	nil	22-5
	m	15		1-Jul-81	19-Jan-89	394.14	91.97	7.56	grounds	13-Jul-39	nil	41-12
	f	9		17-Mar-86	12-Sep-86	25.57	5.97	0.49	clerkess	14-Feb-64	h grade	22-1
	m	15		16-May-75	16-Sep-79	226.29	52.80	4.34	elect	5-Nov-41	c&g	33-7
	f	1		14-Jul-75	8-Aug-76	55.86	13.03	1.07	clerkess	28-May-30	o grade	45-2
	m	13		11-Nov-63	4-Jan-76	633.86	147.90	12.16	inspect	17-Apr-38	nil	25-7
	f	15		23-Nov-77	14-Aug-78	37.71	8.80	0.72	clerkess	30-Aug-41	nil	36-3
	f	13		23-Oct-72	7-Jul-75	141.00	32.90	2.70	clerkess	29-May-26	nil	46-5
	m	15		20-Apr-76	9-Jun-78	111.43	26.00	2.14	clerk	16-Jan-53	nil	23-4
	m	13		16-Oct-67	14-Mar-89	1117.14	260.67	21.42	manager	1-Jul-29	nil	38-4
	m	10		9-Jan-84	18-Jan-85	53.57	12.50	1.03	qs	20-Jun-36	arics	47-7
	f	14		22-May-78	16-Nov-80	129.86	30.30	2.49	clerkess	4-Apr-55	nil	23-2
	m	15		5-Jul-76	18-May-79	149.57	34.90	2.87	engi	21-May-54	nil	22-2
	f	14		19-Dec-77	21-Sep-78	39.43	9.20	0.76	clerkess	22-Apr-55	nil	22-8
	f	13		21-Dec-70	22-Jun-75	234.86	54.80	4.50	clerkess	4-May-52	nil	18-8
	m	13		20-May-47	25-Jan-87	2070.71	483.17	39.71	manager	11-Oct-31	nil	15-8
	f	13		8-Aug-66	9-Mar-87	1074.00	250.60	20.60	clerkess	16-Dec-40	nil	25-8
	m	13		22-Dec-71	8-Jan-83	576.43	134.50	11.05	manager	30-Dec-19	nil	51-12
	m	7		16-May-75	9-Feb-76	38.43	8.97	0.74	esti	18-Feb-51	nil	24-3
	m	13		27-Jun-49	15-Oct-80	1633.29	381.10	31.32	inspect	26-Dec-24	nil	24-7
	m	8		8-Feb-82	11-Dec-88	356.86	83.27	6.84	clerk	24-Mar-64	h grade	17-11
	m	13		21-Jun-71	2-Mar-80	453.86	105.90	8.70	tech	27-Jun-51	nil	19-12
	f	15		1-Feb-79	28-Feb-86	369.14	86.13	7.08	clerkess	7-Jan-31	nil	48-1
	f	1		18-Aug-75	17-Jun-77	95.57	22.30	1.83	clerk	18-Mar-56	nil	19-6
	m	13		2-Jul-73	30-Sep-77	221.57	51.70	4.25	buyer	4-Jun-50	nil	23-1
	m	13		5-Jan-70	17-Aug-80	553.86	129.23	10.62	buyer	18-Aug-15	nil	54-5
	m	15		16-May-75	18-May-86	574.29	134.00	11.01	surv	6-Jul-49	nil	25-11
	f	10		22-Apr-85	3-Mar-98	671.14	156.60	12.87	clerkess	10-May-67	nil	17-12
	m	13		18-Jun-73	18-Apr-86	669.57	156.23	12.84	manager	29-Dec-50	nil	22-6
	f	1		3-Sep-79	12-Apr-81	83.86	19.57	1.61	clerkess	11-Jan-58	h grade	21-8
	m	15		19-Jan-87	14-Sep-88	86.29	20.13	1.65	clerk	16-Feb-60	nil	26-12
	m	15		9-Jul-90	14-Sep-90	9.57	2.23	0.18	grounds	22-Sep-72	nil	17-10
	f	15		2-Jul-90	28-Sep-90	12.57	2.93	0.24	grounds	26-Dec-65	nil	24-7
	m	13		6-Mar-61	16-Dec-88	1449.57	338.23	27.80	grounds	3-Jan-37	nil	24-3
	m	13		13-Mar-78	26-May-89	584.57	136.40	11.21	painter	7-Dec-28	c&g	49-4
	m	15		13-Jul-81	18-Sep-89	427.00	99.63	8.19	driver	23-Jun-33	nil	48-1
	m	8		5-Aug-85	15-Dec-89	227.57	53.10	4.36	plumb	15-Apr-69	c&g	16-4

	m	13		10-Jan-72	6-Jul-90	964.57	225.07	18.50	labour	10-Jul-25	nil	46-7
	m	1		22-Oct-90	23-Oct-90	0.14	0.03	0.00	painter	28-Dec-63	c&g	26-10
	m	8		4-Aug-81	6-Oct-89	426.43	99.50	8.18	joiner	10-Dec-63	h grade	17-8
	m	13		6-Sep-65	19-Sep-90	1306.29	304.80	25.05	labour	15-Nov-34	nil	30-10
	f	7		23-Feb-87	13-Oct-89	137.57	32.10	2.64	cleaner	5-Sep-51	nil	35-6
	m	15		14-Jan-74	14-Apr-89	795.57	185.63	15.26	grounds	3-Mar-51	nil	22-11
	m	8		5-Aug-85	29-Sep-89	216.57	50.53	4.15	joiner	24-Jan-69	c&g	16-7
	m	14		11-Nov-85	29-Dec-89	215.57	50.30	4.13	store	23-Jul-35	nil	50-4
	m	10		5-May-87	15-Sep-89	123.43	28.80	2.37	grounds	6-Apr-65	nil	22-1
	m	15		14-Jun-76	31-Dec-85	498.14	116.23	9.55	gard	9-Nov-24	nil	51-8
	m	15		21-Sep-81	20-Oct-89	421.57	98.37	8.08	grounds	17-Sep-65	nil	16-1
	m	8		11-Aug-86	6-Oct-89	164.57	38.40	3.16	brickl	23-Jun-70	o grade	16-2
	m	13		31-Jan-72	30-Mar-86	738.86	172.40	14.17	mech	25-Jul-28	c&g	43-7
	m	13		10-Sep-73	13-Aug-90	883.00	206.03	16.93	store	18-Nov-37	nil	35-10
	m	13		2-Jul-63	9-Jun-89	1353.43	315.80	25.96	joiner	11-Jun-24	c&g	39-1
	m	15		7-Jul-86	31-Mar-89	142.57	33.27	2.73	labour	17-Oct-59	nil	26-9
	m	13		1-Mar-71	23-Jun-89	955.57	222.97	18.33	store	31-Oct-25	nil	45-4
	m	15		16-Aug-82	31-Mar-89	345.57	80.63	6.63	joiner	18-May-66	c&g	16-3
	m	10		8-May-90	7-Jan-91	34.86	8.13	0.67	engi	30-Dec-52	c&g	37-5
	m	6		5-Jun-90	6-Jul-90	4.43	1.03	0.08	brickl	23-Feb-60	c&g	30-4
	m	15		26-Nov-79	7-Feb-90	532.29	124.20	10.21	labour	23-Sep-36	nil	43-3
	m	15		16-Feb-76	2-May-90	741.29	172.97	14.22	gard	4-Oct-49	nil	26-5
	m	13		2-Aug-61	17-Mar-78	867.29	202.37	16.63	engi	7-Jun-45	c&g	16-2
	m	13		26-May-58	16-Jan-80	1129.29	263.50	21.66	gard	16-Jan-15	nil	43-5
	m	15		23-Oct-79	9-Mar-84	228.43	53.30	4.38	painter	2-Feb-51	c&g	28-9
	m	7		26-Feb-85	20-Oct-88	190.29	44.40	3.65	labour	4-May-55	nil	29-10
	m	8		5-Aug-79	9-Jan-89	492.14	114.83	9.44	joiner	22-Jun-63	c&g	16-2
	m	13		25-May-65	18-Nov-82	912.29	212.87	17.50	grounds	28-Sep-26	nil	38-8
	m	10		28-Jan-80	8-May-81	66.57	15.53	1.28	painter	29-Jun-45	c&g	34-7
	m	13		22-Apr-68	3-Jul-79	584.14	136.30	11.20	grounds	4-Jul-14	nil	53-10
	m	7		3-Nov-75	21-Nov-78	159.14	37.13	3.05	labour	25-Oct-29	nil	46-1
	m	13		26-Feb-73	2-Jan-90	879.14	205.13	16.86	charge	27-Feb-49	nil	23-12
	m	15		5-Aug-85	21-Sep-90	267.57	62.43	5.13	joiner	27-Apr-68	o grade	17-4
	m	15		13-Aug-84	22-Sep-89	266.57	62.20	5.11	plaster	16-Aug-63	c&g	20-12
	m	8		17-Aug-87	3-Aug-90	154.57	36.07	2.96	painter	23-Jul-71	o grade	16-1
	m	15		22-Mar-76	21-Dec-90	769.57	179.57	14.76	joiner	20-Oct-53	c&g	22-6
	m	15		31-Jan-79	14-Jul-89	545.29	127.23	10.46	plaster	17-Apr-57	c&g	21-10

	m	13		29-Jan-73	30-Jan-90	887.14	207.00	17.01	joiner	5-Oct-32	c&g	40-4
	m	2		18-Jun-90	13-Jul-90	3.57	0.83	0.07	joiner	3-Mar-36	c&g	54-4
	m	15		13-Aug-84	3-Feb-89	233.57	54.50	4.48	grounds	23-Mar-65	nil	19-5
	m	15		26-Apr-82	4-Jan-91	453.57	105.83	8.70	engi	8-May-55	c&g	26-12
	m	13		2-Feb-70	24-Apr-89	1003.00	234.03	19.24	grounds	8-Sep-35	nil	34-5
	m	2		11-Apr-88	24-Feb-89	45.57	10.63	0.87	brickl	23-Mar-55	c&g	33-1
	m	15		12-Jun-78	1-Jun-90	624.57	145.73	11.98	painter	1-Jan-35	c&g	43-6
	m	13		9-Dec-68	15-Jun-90	1122.57	261.93	21.53	painter	23-Jul-34	c&g	34-5
	m	13		13-Feb-63	8-Sep-89	1386.29	323.47	26.59	elect	10-Dec-46	c&g	16-3
	m	15		2-Sep-74	30-Jan-89	752.00	175.47	14.42	grounds	8-Mar-54	nil	20-6
	m	13		6-Aug-90	14-Sep-90	5.57	1.30	0.11	plumb	12-May-57	c&g	33-3
	m	13		16-Jun-59	13-Nov-89	1586.86	370.27	30.43	scaffold	20-Feb-32	nil	27-4
	m	2		5-Mar-90	12-Apr-90	5.43	1.27	0.10	brickl	11-Aug-35	c&g	54-7
	m	8		11-Aug-86	6-Oct-89	164.57	38.40	3.16	brickl	25-Aug-70	o grade	15-12
	m	10		19-Jun-78	3-Mar-89	558.57	130.33	10.71	painter	5-Jan-49	c&g	29-6
	m	10		30-Jan-78	15-Jun-90	645.57	150.63	12.38	painter	16-Apr-30	c&g	47-10
	m	15		7-Jun-78	21-Dec-79	80.29	18.73	1.54	driver	30-Sep-58	nil	19-9
	m	8		8-Aug-88	15-Dec-90	122.71	28.63	2.35	plaster	16-Jan-72	o grade	16-7
	f	6		22-Jun-87	13-Oct-89	120.57	28.13	2.31	cleaner	2-Jul-26	nil	60-12
	m	15		16-Sep-74	11-Feb-77	125.57	29.30	2.41	grounds	27-May-50	nil	24-4
	f	15		24-Oct-88	17-Feb-89	16.57	3.87	0.32	cleaner	3-Sep-39	nil	49-2
	f	13		7-Oct-74	20-Jul-90	823.57	192.17	15.79	cater	26-Jun-34	nil	40-4
	m	13		9-Oct-73	28-Feb-75	72.43	16.90	1.39	labour	26-Dec-41	nil	31-10
	m	15		13-May-74	26-Sep-75	71.57	16.70	1.37	grounds	8-Nov-49	nil	24-7
	m	13		1-Jun-47	14-May-80	1719.43	401.20	32.98	labour	27-Apr-22	nil	25-2
	m	8		4-Aug-81	31-Mar-89	399.43	93.20	7.66	plumb	5-Nov-64	o grade	16-9
	m	15		28-Mar-78	1-Feb-80	96.43	22.50	1.85	joiner	9-Jan-57	c&g	21-3
	m	15		22-Sep-75	27-Oct-78	161.57	37.70	3.10	grounds	22-Sep-57	nil	17-12
	m	11		3-Aug-80	23-Mar-90	502.71	117.30	9.64	roofer	15-Jun-64	o grade	16-2
	m	10		12-Apr-76	25-Jun-78	114.86	26.80	2.20	labour	3-Feb-47	nil	29-3
	m	15		9-May-78	23-Jan-81	141.43	33.00	2.71	plumb	24-Sep-45	c&g	32-8
	m	13		22-Nov-71	22-Mar-74	121.57	28.37	2.33	brickl	23-Mar-35	c&g	36-8
	m	8		3-Sep-79	26-Oct-84	268.57	62.67	5.15	joiner	1-May-62	o grade	17-5
	m	13		15-Feb-54	1-Dec-89	1867.57	435.77	35.82	joiner	3-Dec-24	c&g	29-3
	m	15		1-Jul-75	5-Aug-77	109.43	25.53	2.10	labour	6-Nov-39	nil	35-8
	m	13		20-Dec-67	20-Nov-82	778.43	181.63	14.93	store	17-Apr-17	nil	50-9
	m	15		21-Nov-83	7-Apr-89	280.57	65.47	5.38	grounds	31-Oct-44	nil	39-1

	m	8		29-Aug-77	25-Jun-82	251.57	58.70	4.82	brickl	20-Dec-60	nil	16-9
	m	10		22-Oct-90	23-Oct-90	0.14	0.03	0.00	painter	25-Feb-55	c&g	35-8
	m	13		3-Jul-72	12-Sep-75	166.57	38.87	3.19	joiner	11-Nov-20	c&g	51-8
	m	8		8-Aug-78	12-Oct-84	322.43	75.23	6.18	joiner	29-May-62	o grade	16-3
	m	13		11-Jun-73	19-Oct-79	331.57	77.37	6.36	joiner	11-Jun-52	c&g	20-12
	m	10		9-Sep-85	20-Oct-89	214.57	50.07	4.12	joiner	13-Mar-47	c&g	38-6
	m	13		15-Jan-73	21-Feb-75	109.57	25.57	2.10	labour	29-Feb-44	nil	28-11
	m	15		30-Oct-78	13-Nov-89	576.00	134.40	11.05	grounds	2-Mar-58	nil	20-8
	m	13		4-Oct-76	18-Jan-89	641.29	149.63	12.30	labour	21-Jan-33	nil	43-9
	m	10		16-Aug-82	27-Sep-85	162.57	37.93	3.12	painter	24-Oct-65	o grade	16-10
	m	15		22-May-84	29-Mar-90	305.29	71.23	5.85	driver	19-Nov-57	nil	26-7
	m	7		23-May-83	25-Jan-85	87.57	20.43	1.68	grounds	8-Oct-59	nil	23-8
	m	15		18-Aug-75	22-May-81	300.57	70.13	5.76	joiner	16-Nov-44	c&g	30-10
	f	1		27-Oct-75	1-Jul-79	191.86	44.77	3.68	clerkess	14-Jun-58	h grade	17-5
	m	13		23-Jul-72	14-Dec-80	438.00	102.20	8.40	purchase	17-Nov-25	nil	46-9
	f	15		7-Jul-75	12-Dec-75	22.57	5.27	0.43	typist	14-Feb-55	nil	20-5
	f	10		16-May-88	22-Jan-89	35.86	8.37	0.69	clerk	16-Jun-67	nil	20-11
	f	15		12-Aug-74	10-Jun-77	147.57	34.43	2.83	typist	19-May-58	nil	16-3
	f	7		16-May-83	16-Sep-84	69.86	16.30	1.34	clerkess	10-Feb-64	nil	19-4
	f	10		7-Jul-75	29-Jul-77	107.57	25.10	2.06	clerkess	3-Apr-51	nil	24-4
	f	14		24-Dec-84	11-Jan-85	2.57	0.60	0.05	typist	19-Jan-45	nil	39-12
	f	15		9-Jan-78	23-Mar-79	62.57	14.60	1.20	purchase	15-Oct-54	nil	23-3
	f	14		12-Jan-83	29-Mar-83	10.86	2.53	0.21	clerkess	17-Oct-32	nil	50-3
	f	13		7-May-85	26-Jun-87	111.43	26.00	2.14	clerkess	24-Aug-62	h grade	22-9
	m	13		22-Oct-73	4-Feb-83	484.57	113.07	9.29	clerk	5-Feb-58	nil	15-9
	f	15		11-Feb-86	28-Aug-88	132.71	30.97	2.55	clerkess	23-Feb-69	nil	16-12
	m	8		17-Jun-85	28-Sep-86	66.86	15.60	1.28	tech	14-Feb-66	h grade	19-5
	f	1		6-Dec-82	8-Feb-85	113.57	26.50	2.18	clerkess	14-Jul-55	nil	27-5
	m	7		26-Aug-68	29-Jun-86	930.86	217.20	17.85	gard	23-Jan-40	nil	28-8
	f	13		17-May-71	5-Jun-81	524.57	122.40	10.06	clerkess	16-Jun-16	nil	54-11
	m	8		17-Jun-85	4-Sep-86	63.43	14.80	1.22	tech	17-Mar-65	o grade	20-4
	m	13		4-Dec-67	2-Mar-75	377.86	88.17	7.25	elect	14-Jun-45	c&g	22-6
	m	2		22-Apr-85	26-Jul-85	13.57	3.17	0.26	surv	21-Nov-60	arics	24-5
	m	15		31-Jul-78	6-Jul-79	48.57	11.33	0.93	admin	24-Jan-47	nil	31-7
	m	8		23-Aug-76	1-Jun-79	144.57	33.73	2.77	clerk	7-Apr-58	o grade	18-5
	f	2		28-Sep-82	4-Jun-85	140.00	32.67	2.68	admin	10-Jul-56	dip	26-3
	f	10		20-May-83	2-Oct-83	19.29	4.50	0.37	clerkess	5-Jun-61	nil	21-12

	f	15		2-Sep-74	15-May-75	36.43	8.50	0.70	clerkess	8-Feb-34	nil	40-7
	f	15		20-Mar-75	28-Jan-85	514.57	120.07	9.87	clerkess	22-Apr-23	nil	51-11
	m	13		6-Mar-72	21-Jun-76	224.00	52.27	4.30	manager	29-Aug-14	nil	57-7
	m	13		14-Jul-69	7-Sep-77	425.29	99.23	8.16	manager	13-Apr-31	nil	38-4
	m	15		25-Aug-75	4-May-79	192.57	44.93	3.69	clerk	5-May-51	nil	24-4
	m	13		29-Aug-66	5-Jan-83	853.29	199.10	16.36	charge	24-Jan-34	nil	32-8
	m	13		14-May-56	6-Jul-84	1468.57	342.67	28.16	charge	7-Jul-20	nil	35-11
	m	13		28-Jun-67	17-May-83	828.86	193.40	15.90	store	18-May-18	nil	49-2
	m	13		7-Jan-66	3-Jul-88	1173.29	273.77	22.50	admin	23-Dec-32	nil	33-1
	f	13		9-Apr-80	30-Mar-81	50.71	11.83	0.97	clerkess	6-Aug-57	nil	22-9
	m	10		26-Mar-84	9-Sep-84	23.86	5.57	0.46	surv	25-Apr-62	h grade	21-12
	m	13		20-Sep-71	3-Jun-82	558.43	130.30	10.71	manager	20-Apr-19	nil	52-6
	m	10		2-Apr-84	9-Sep-84	22.86	5.33	0.44	surv	31-Mar-61	degree	23-1
	m	13		30-Aug-71	31-Mar-83	604.43	141.03	11.59	manager	12-Dec-23	nil	47-9
	m	9		17-Mar-86	14-Sep-86	25.86	6.03	0.50	surv	6-Nov-65	h grade	20-5
	m	13		12-Feb-73	25-Jan-85	623.57	145.50	11.96	joiner	23-Mar-47	c&g	25-11
	m	13		2-Oct-68	12-Jul-87	979.57	228.57	18.79	painter	16-Jun-27	c&g	41-4
	f	14		5-May-87	2-Oct-87	21.43	5.00	0.41	clerkess	20-Oct-60	nil	26-7
	f	1		3-Nov-75	5-Nov-78	156.86	36.60	3.01	typist	7-Jun-54	nil	21-5
	f	14		25-Apr-88	4-Sep-88	18.86	4.40	0.36	typist	20-Dec-68	nil	19-5
	f	15		16-Jun-75	11-Jun-76	51.57	12.03	0.99	clerkess	2-May-57	nil	18-2
	m	13		16-Feb-70	15-Jan-78	412.86	96.33	7.92	roofer	25-May-23	c&g	46-9
	m	13		15-Feb-60	13-Aug-86	1382.29	322.53	26.51	manager	24-Feb-39	nil	20-12
	f	1		19-Jun-78	6-Jan-80	80.86	18.87	1.55	clerkess	6-Aug-59	o grade	18-11
	m	14		1-Jul-85	12-Aug-85	6.00	1.40	0.12	clerk	15-Jul-66	nil	18-12
	f	13		3-Jul-73	8-Oct-84	587.86	137.17	11.27	clerkess	20-Feb-34	nil	39-5
	f	10		22-Aug-77	30-Sep-77	5.57	1.30	0.11	clerkess	17-Jan-34	nil	43-8
	m	2		28-Mar-88	13-Nov-88	32.86	7.67	0.63	qs	23-Jul-67	degree	20-9
	f	1		11-Aug-75	1-Apr-77	85.57	19.97	1.64	clerkess	28-Jan-52	nil	23-7
	m	13		6-Dec-71	26-Jul-81	502.86	117.33	9.64	charge	27-Jul-16	nil	55-5
	f	14		27-Jun-88	23-Oct-88	16.86	3.93	0.32	purchase	22-Apr-52	nil	36-3
	m	9		2-Jul-84	20-Sep-85	63.57	14.83	1.22	tech	8-Sep-64	h grade	19-10
	f	1		15-May-78	19-May-78	0.57	0.13	0.01	clerkess	19-Sep-53	nil	24-8
	f	10		6-Jul-87	9-Aug-87	4.86	1.13	0.09	clerkess	11-Mar-68	nil	19-4
	f	15		26-Nov-79	10-Apr-88	436.86	101.93	8.38	clerkess	30-Dec-62	nil	16-11
	f	14		30-May-78	30-Jun-78	4.43	1.03	0.08	clerkess	16-Dec-56	nil	21-6
	f	14		18-Jun-84	16-Sep-84	12.86	3.00	0.25	clerkess	24-Jun-65	nil	18-12

	f	1		27-Oct-75	15-May-77	80.86	18.87	1.55	clerkess	16-Jan-42	nil	33-10
	m	13		7-Aug-67	12-Oct-80	687.86	160.50	13.19	tech	1-Jun-51	nil	16-3
	m	13		14-Sep-59	21-Nov-75	844.57	197.07	16.20	charge	21-Nov-10	nil	48-10
	f	1		19-Jun-78	29-Feb-80	88.57	20.67	1.70	clerkess	13-Jan-34	nil	44-6
	f	2		11-Aug-75	26-Mar-76	32.57	7.60	0.62	clerkess	18-Jul-57	nil	18-1
	m	13		27-Nov-61	2-Apr-79	905.00	211.17	17.36	clerk	29-Oct-37	nil	24-1
	m	13		1-Apr-74	13-Apr-84	523.57	122.17	10.04	clerk	5-Oct-21	nil	52-6
	m	15		9-Oct-78	8-Dec-78	8.57	2.00	0.16	purchase	17-Mar-66	nil	12-7
	m	13		14-May-48	7-Sep-86	1999.29	466.50	38.34	admin	15-Aug-22	nil	25-9
	m	13		3-Dec-73	5-Aug-76	139.43	32.53	2.67	manager	26-Jan-19	nil	54-11
	m	13		26-Mar-56	24-Aug-77	1117.29	260.70	21.43	manager	18-Nov-33	nil	22-5
	m	13		22-Sep-68	23-Oct-77	474.00	110.60	9.09	manager	2-Jun-33	nil	35-4
	f	1		4-Dec-78	16-Apr-89	540.86	126.20	10.37	clerkess	9-Jan-45	nil	33-11
	m	15		17-Sep-79	17-Jul-83	199.86	46.63	3.83	engi	21-Feb-48	c&g	31-7
	f	15		19-Mar-79	16-Jul-79	17.00	3.97	0.33	clerkess	10-Sep-60	nil	18-7
	f	14		11-Jun-84	29-Jun-84	2.57	0.60	0.05	clerkess	16-Jul-66	nil	17-11
	f	8		11-Oct-82	3-Mar-85	124.86	29.13	2.39	clerkess	14-Aug-64	o grade	18-2
	m	13		25-Mar-47	31-Mar-83	1879.29	438.50	36.04	manager	28-Nov-21	nil	25-4
	f	1		27-Oct-75	12-Nov-76	54.57	12.73	1.05	clerkess	24-Aug-50	nil	25-3
	m	14		31-Jan-83	26-Sep-90	399.29	93.17	7.66	scaffold	26-Apr-46	nil	36-10
	m	13		7-Jun-65	5-Dec-75	547.57	127.77	10.50	joiner	25-Nov-12	c&g	52-7
	m	15		5-Jun-89	2-Sep-89	12.71	2.97	0.24	labour	26-Jul-65	nil	23-11
	m	15		23-Apr-79	5-Jul-89	532.29	124.20	10.21	gard	6-Mar-48	nil	31-2
	m	8		13-Aug-84	7-Apr-89	242.57	56.60	4.65	elect	20-Jun-57	o grade	27-2
	m	15		2-Mar-87	26-Sep-90	186.29	43.47	3.57	grounds	14-Sep-57	nil	29-6
	m	13		4-May-70	11-Jun-90	1049.00	244.77	20.12	joiner	8-Jul-30	c&g	39-10
	m	13		3-Nov-53	11-Jan-84	1575.14	367.53	30.21	joiner	16-Aug-33	c&g	20-3
	m	15		28-Aug-77	10-Feb-89	597.71	139.47	11.46	joiner	14-Mar-61	c&g	16-6
	m	10		29-Feb-88	6-Sep-90	131.43	30.67	2.52	brickl	4-Mar-67	c&g	20-12
	m	15		18-Mar-85	6-Feb-89	203.00	47.37	3.89	grounds	30-Sep-53	nil	31-6
	m	13		1-Dec-69	30-May-86	860.57	200.80	16.50	painter	27-May-44	c&g	25-7
	m	7		9-Jan-84	3-Aug-89	290.43	67.77	5.57	labour	3-Aug-24	nil	59-6
	f	15		17-May-76	13-Oct-89	699.57	163.23	13.42	cleaner	15-Nov-47	nil	28-7
	m	13		12-Feb-69	15-Jun-90	1113.29	259.77	21.35	painter	24-Nov-33	c&g	35-3
	m	6		10-Jun-90	14-Sep-90	13.71	3.20	0.26	grounds	29-Oct-71	nil	18-8
	m	15		1-Oct-79	27-Aug-90	569.00	132.77	10.91	grounds	18-Dec-29	nil	49-10
	m	13		20-Oct-69	22-Jun-90	1078.57	251.67	20.68	painter	31-Mar-32	c&g	37-7

	m	15		14-Mar-83	22-Nov-89	349.29	81.50	6.70	labour	25-Jul-43	nil	39-8
	m	15		25-Sep-79	6-Mar-89	492.86	115.00	9.45	grounds	21-Sep-37	nil	42-1
	m	7		23-May-90	10-Aug-90	11.29	2.63	0.22	brickl	31-Mar-60	nil	30-2
	m	10		4-Aug-81	21-Apr-89	402.43	93.90	7.72	joiner	13-Apr-64	o grade	17-4
	m	15		30-Jul-78	19-Oct-89	585.57	136.63	11.23	painter	24-Mar-28	c&g	50-5
	m	10		15-Sep-80	21-Jul-89	461.57	107.70	8.85	plumb	23-Jul-24	c&g	56-2
	m	13		14-Sep-70	8-Feb-89	960.29	224.07	18.42	plumb	23-Feb-28	c&g	42-7
	m	15		6-Oct-75	17-Feb-89	697.57	162.77	13.38	charge	4-Nov-55	nil	19-12
	m	13		6-Aug-73	7-Jun-89	826.29	192.80	15.85	elect	7-Jun-57	c&g	16-2
	m	13		28-Feb-63	5-Jan-90	1401.14	326.93	26.87	plumb	17-Jul-42	c&g	20-8
	m	13		12-Jun-61	4-Sep-89	1473.00	343.70	28.25	grounds	18-Mar-42	nil	19-3
	m	8		5-Aug-85	8-Dec-89	226.57	52.87	4.35	roofer	2-Dec-67	o grade	17-9
	f	14		10-Nov-85	13-Oct-89	204.71	47.77	3.93	cleaner	3-Dec-46	nil	38-12
	m	8		8-Aug-88	4-Sep-90	108.14	25.23	2.07	roofer	3-May-72	o grade	16-4
	m	13		21-Aug-72	8-Jan-91	959.14	223.80	18.39	gard	9-Jun-44	nil	28-3
	m	6		11-Jun-90	21-Sep-90	14.57	3.40	0.28	grounds	25-Apr-72	nil	18-2
	f	15		7-Feb-90	20-Jul-90	23.29	5.43	0.45	cater	12-Jan-50	nil	40-1
	m	10		26-Aug-85	29-Sep-89	213.57	49.83	4.10	plumb	15-Jul-64	c&g	21-2
	f	15		13-Sep-89	3-Nov-89	7.29	1.70	0.14	cleaner	7-May-76	nil	13-5
	f	15		20-Nov-84	13-Oct-89	255.43	59.60	4.90	cleaner	30-Aug-39	nil	45-3
	m	2		30-Jul-79	16-Oct-89	533.00	124.37	10.22	painter	14-Jul-45	c&g	34-1
	m	8		11-Aug-86	26-Oct-90	219.57	51.23	4.21	joiner	7-Sep-70	o grade	15-12
	f	15		23-Jun-75	13-Oct-89	746.57	174.20	14.32	cleaner	6-Apr-44	nil	31-3
	m	10		10-Aug-82	27-Apr-90	402.43	93.90	7.72	joiner	28-Jul-65	h grade	17-1
	f	13		7-Aug-74	13-Oct-89	792.29	184.87	15.19	cleaner	13-Apr-31	nil	43-4
	m	10		30-May-88	24-Feb-89	38.57	9.00	0.74	brickl	5-Sep-47	c&g	40-9
	m	15		29-Nov-82	15-May-89	337.00	78.63	6.46	roofer	27-Jan-36	nil	46-11
	m	8		13-Aug-84	2-Jun-89	250.57	58.47	4.81	joiner	17-Jul-68	o grade	16-1
	f	15		11-Jun-90	3-Aug-90	7.57	1.77	0.15	grounds	22-Jan-74	nil	16-5
	m	8		25-Jun-90	17-Aug-90	7.57	1.77	0.15	grounds	15-Jun-74	nil	16-1
	m	10		4-Aug-81	6-Oct-89	426.43	99.50	8.18	joiner	14-Jun-64	o grade	17-2
	m	10		22-Aug-88	1-Dec-89	66.57	15.53	1.28	elect	25-Nov-65	ograde	22-9
	m	10		6-Aug-79	6-Dec-84	278.43	64.97	5.34	plaster	23-Jun-62	o grade	17-2
	m	13		18-Aug-59	5-Jul-85	1350.43	315.10	25.90	elect	20-Oct-43	c&g	15-10
	m	13		7-Mar-72	22-Oct-89	919.71	214.60	17.64	labour	7-Feb-51	nil	21-1
	m	10		12-Mar-90	28-Mar-90	2.29	0.53	0.04	brickl	17-Oct-36	c&g	53-5
	f	15		20-Mar-90	20-Jul-90	17.43	4.07	0.33	cater	24-May-52	nil	37-10

	m	2		5-Mar-90	12-Apr-90	5.43	1.27	0.10	labour	10-Feb-57	nil	33-1
	m	13		22-Jun-64	25-Apr-90	1348.29	314.60	25.86	elect	30-Jan-48	c&g	16-5
	m	8		3-Aug-87	20-Aug-90	159.00	37.10	3.05	painter	18-Apr-71	o grade	16-4
	f	15		7-Nov-88	20-Oct-89	49.57	11.57	0.95	cleaner	15-Dec-55	nil	32-11
	m	7		26-May-75	23-Feb-86	560.86	130.87	10.76	joiner	28-Oct-51	c&g	23-7
	m	15		3-Nov-75	19-Sep-89	724.14	168.97	13.89	grounds	29-Aug-32	nil	43-3
	f	15		11-Jun-84	11-Oct-85	69.57	16.23	1.33	cleaner	27-Feb-55	nil	29-4
	m	10		1-Aug-77	17-Mar-89	606.57	141.53	11.63	joiner	4-Apr-61	o grade	16-4
	m	8		7-Aug-78	18-Aug-89	575.57	134.30	11.04	plumb	4-Aug-61	o grade	17-1
	m	15		12-Jun-90	28-Sep-90	15.43	3.60	0.30	grounds	26-Sep-68	nil	21-9
	m	10		23-May-90	10-Aug-90	11.29	2.63	0.22	labour	12-Jan-65	nil	25-5
	m	13		6-Oct-47	21-Jan-83	1841.57	429.70	35.32	labour	24-Mar-18	nil	29-7
	m	15		23-May-90	10-Aug-90	11.29	2.63	0.22	brickl	19-Nov-63	nil	26-7
	m	15		4-Feb-80	28-Mar-86	320.57	74.80	6.15	painter	23-Nov-33	c&g	46-3
	m	15		12-Jun-89	28-Jul-89	6.57	1.53	0.13	grounds	26-Jan-69	nil	20-5
	m	13		5-Jan-60	24-Sep-78	976.71	227.90	18.73	labour	27-May-31	nil	28-8
	m	13		20-Apr-64	5-Mar-90	1350.00	315.00	25.89	gard	29-Apr-30	nil	33-12
	m	7		9-May-78	18-Nov-82	236.29	55.13	4.53	plumb	16-Oct-28	c&g	49-7
	m	15		25-Sep-79	10-Jan-89	485.00	113.17	9.30	grounds	24-Jun-52	nil	27-4
	m	15		13-Jun-90	7-Sep-90	12.29	2.87	0.24	grounds	15-Jan-72	nil	18-5
	m	10		3-Aug-87	19-Oct-90	167.57	39.10	3.21	joiner	13-Nov-70	o grade	16-9
	m	10		22-Aug-83	27-Oct-89	322.57	75.27	6.19	plumb	29-Dec-66	o grade	16-8
	m	13		9-May-66	2-Oct-89	1221.00	284.90	23.42	elect	30-Dec-34	c&g	31-5
	m	15		26-Aug-85	6-Apr-90	240.57	56.13	4.61	grounds	15-Feb-65	nil	20-7
	m	13		1-Jul-68	30-Dec-77	495.57	115.63	9.50	joiner	13-Oct-47	c&g	20-9
	m	2		18-Apr-88	6-Sep-90	124.43	29.03	2.39	brickl	8-Nov-57	c&g	30-6
	m	2		5-Mar-90	25-May-90	11.57	2.70	0.22	brickl	26-Oct-54	c&g	35-5
	m	6		5-Jun-90	6-Jul-90	4.43	1.03	0.08	brickl	10-Dec-64	c&g	25-6
	f	13		27-Jun-83	13-Oct-89	328.57	76.67	6.30	cleaner	8-Feb-53	nil	30-5
	m	6		2-Jul-90	17-Aug-90	6.57	1.53	0.13	grounds	21-May-73	nil	17-2
	m	10		21-Nov-83	6-Sep-90	354.43	82.70	6.80	brickl	22-Apr-56	c&g	27-7
	f	15		14-Nov-78	13-Oct-89	569.43	132.87	10.92	cleaner	14-Jul-38	nil	40-5
	m	10		3-Apr-78	15-Jun-90	636.57	148.53	12.21	painter	6-Jun-67	c&g	10-10
	m	15		25-May-87	14-Sep-90	172.57	40.27	3.31	labour	24-Feb-71	nil	16-3
	m	15		9-May-83	22-Dec-89	345.57	80.63	6.63	grounds	10-Feb-56	nil	27-3
	m	13		14-May-73	2-Sep-82	485.43	113.27	9.31	joiner	2-Sep-17	c&g	55-9
	m	13		12-Aug-63	30-Mar-90	1389.57	324.23	26.65	painter	13-May-34	c&g	29-3

	m	8		23-Oct-79	13-Dec-83	216.00	50.40	4.14	plumb	27-Jun-62	o grade	17-4
	m	13		5-Mar-73	10-Nov-83	557.43	130.07	10.69	grounds	27-May-30	nil	42-10
	m	8		5-Aug-88	28-Sep-90	112.00	26.13	2.15	joiner	9-Aug-68	o grade	19-12
	m	15		17-Mar-75	9-Mar-79	207.57	48.43	3.98	labour	1-Sep-33	nil	41-7
	m	10		30-Jun-75	16-Nov-79	228.57	53.33	4.38	elect	15-Apr-33	c&g	42-3
	m	13		13-Apr-59	5-Oct-76	912.14	212.83	17.49	roofer	6-Oct-11	nil	47-7
	m	10		1-Dec-75	13-Jun-79	184.29	43.00	3.53	charge	5-Aug-31	nil	44-4
	m	13		10-Aug-70	7-Jul-89	986.57	230.20	18.92	store	8-Jul-24	nil	46-2
	m	13		7-Feb-66	21-Feb-75	471.57	110.03	9.04	brickl	29-Jun-15	c&g	50-8
	m	13		11-Feb-70	9-Jan-76	308.29	71.93	5.91	joiner	6-Dec-49	c&g	20-3
	m	7		19-Aug-74	11-Sep-80	316.43	73.83	6.07	brickl	14-Jan-23	c&g	51-8
	m	15		18-Sep-78	14-Jul-89	564.57	131.73	10.83	elect	12-Jul-60	c&g	18-3
	m	13		8-Nov-54	8-Aug-89	1813.14	423.07	34.77	joiner	20-Mar-26	c&g	28-8
	m	6		11-Jun-90	14-Sep-90	13.57	3.17	0.26	grounds	28-Jun-72	nil	17-12
	m	15		19-Jun-78	28-Feb-90	610.29	142.40	11.70	grounds	15-Apr-28	nil	50-3
	m	15		8-Oct-79	19-Oct-90	575.57	134.30	11.04	painter	23-Oct-44	c&g	34-12
	m	10		5-Jun-90	6-Jul-90	4.43	1.03	0.08	labour	1-Jul-62	nil	27-12
	m	10		5-Aug-85	1-Oct-90	269.00	62.77	5.16	joiner	13-Oct-68	o grade	16-10
	m	15		22-Oct-79	28-Feb-90	540.29	126.07	10.36	labour	6-May-29	nil	50-6
	m	13		29-Jan-51	1-Oct-90	2070.00	483.00	39.70	plaster	7-Jan-29	c&g	22-1
	m	13		12-Oct-64	27-Jan-89	1267.57	295.77	24.31	grounds	28-Jan-24	nil	40-9
	m	13		14-May-73	14-Aug-89	848.00	197.87	16.26	joiner	20-Aug-52	c&g	20-9
	m	13		2-Aug-64	18-Apr-89	1289.29	300.83	24.73	driver	11-Aug-46	nil	17-12
	m	13		23-Jan-79	9-Mar-90	580.43	135.43	11.13	elect	20-Aug-29	c&g	49-6
	m	15		30-Oct-89	31-Oct-89	0.14	0.03	0.00	joiner	12-Jul-61	nil	28-4
	m	7		26-Aug-85	9-Mar-90	236.57	55.20	4.54	grounds	27-Jun-65	nil	20-2
	m	13		20-Sep-55	20-Nov-87	1678.43	391.63	32.19	w-mach	10-May-27	c&g	28-5
	m	10		5-May-87	28-Sep-90	177.43	41.40	3.40	gard	19-Jul-66	nil	20-10
	m	15		12-Jul-82	3-Oct-90	429.29	100.17	8.23	grounds	11-Feb-31	nil	51-5
	m	10		24-Apr-84	23-May-89	265.00	61.83	5.08	grounds	25-Aug-64	nil	19-8
	m	15		19-Sep-77	8-May-90	659.14	153.80	12.64	grounds	2-May-58	nil	19-5
	m	6		11-Jun-90	7-Sep-90	12.57	2.93	0.24	grounds	24-Jan-73	nil	17-5
	m	13		19-Aug-74	5-Sep-89	785.14	183.20	15.06	brickl	9-Jan-35	c&g	39-8
	m	2		11-Jun-90	22-Jun-90	1.57	0.37	0.03	joiner	13-Jun-66	c&g	23-12
	m	7		20-Aug-90	24-Oct-90	9.29	2.17	0.18	joiner	12-Jan-64	c&g	26-8
	m	13		5-May-49	25-Jan-91	2177.14	508.00	41.75	plaster	26-Jan-26	c&g	23-4
	m	10		21-Dec-87	16-Nov-90	151.57	35.37	2.91	grounds	27-Nov-69	nil	18-1

	m	13		2-Apr-73	12-Feb-90	880.00	205.33	16.88	joiner	1-Dec-29	c&g	43-5
	m	6		20-Nov-89	23-Mar-90	17.57	4.10	0.34	elect	7-Aug-40	c&g	49-4
	m	8		22-Aug-83	19-Jul-90	360.43	84.10	6.91	roofer	12-May-67	o grade	16-4
	m	2		5-Mar-90	12-Apr-90	5.43	1.27	0.10	bri	13-Dec-35	c	54-3
	m	10		10-Nov-75	8-Oct-80	256.29	59.80	4.92	gro	30-Oct-28	n	47-1
	m	13		16-Oct-72	22-Jun-90	922.57	215.27	17.69	pai	26-Apr-31	c	41-6
	m	10		13-Mar-78	28-Mar-86	419.57	97.90	8.05	pai	5-Feb-29	c	49-2
	f	7		9-Mar-88	13-Oct-89	83.29	19.43	1.60	cle	28-Apr-52	n	35-11
	m	8		13-Aug-84	10-Nov-89	273.57	63.83	5.25	joi	9-May-67	o grade	17-4
	m	15		26-Jan-76	12-Jun-89	698.00	162.87	13.39	joi	17-Aug-28	c	47-6
	m	8		17-Oct-77	25-Apr-86	444.57	103.73	8.53	pai	5-Aug-61	o grade	16-3
	m	13		1-Apr-59	6-Jun-90	1627.00	379.63	31.20	joi	1-Jun-36	c	22-10
	f	13		30-Jul-73	17-Feb-80	341.86	79.77	6.56	clerkess	8-Jan-26	n	47-7
	m	2		5-Apr-88	26-Feb-89	46.71	10.90	0.90	qs	18-Oct-65	h	22-6
	f	7		20-Oct-85	12-Jun-87	85.71	20.00	1.64	clerkess	11-Aug-64	n	21-3
	f	14		24-Oct-88	27-Nov-88	4.86	1.13	0.09	clerkess	3-Mar-68	n	20-8
	f	15		8-Jan-79	16-Jul-82	183.57	42.83	3.52	cles	9-Apr-58	n	20-9
	f	14		6-Apr-81	8-Jan-84	143.86	33.57	2.76	cle	26-Apr-50	n	30-12
	f	14		25-Feb-85	3-May-85	9.57	2.23	0.18	typ	9-Jun-66	n	18-9
	m	13		12-Aug-56	9-Mar-80	1230.00	287.00	23.59	joi	10-Mar-15	c	41-6
	f	6		1-Nov-82	22-Jan-89	324.86	75.80	6.23	typ	19-Jul-62	n	20-4
	m	15		2-Jul-84	20-Sep-85	63.57	14.83	1.22	tech	18-Apr-64	h	20-3
	f	14		5-Jan-81	13-Oct-85	248.86	58.07	4.77	cles	2-Aug-57	n	23-6
	f	15		4-Jun-79	14-Nov-82	179.86	41.97	3.45	cles	24-Jan-60	h	19-5
	m	15		29-Jul-57	27-Nov-77	1060.86	247.53	20.35	man	12-Jun-33	n	24-2
	f	14		21-Jan-86	29-Sep-86	35.86	8.37	0.69	cles	31-May-44	n	41-8
	m	2		7-Sep-82	21-Sep-82	2.00	0.47	0.04	acc	1-Nov-48	ca	33-11
	f	2		7-Jul-75	8-Aug-76	56.86	13.27	1.09	pur	24-Apr-45	n	30-3
	m	7		20-Jan-86	25-Jul-86	26.57	6.20	0.51	joi	8-Apr-62	c	23-10
	f	13		16-Dec-74	14-May-76	73.57	17.17	1.41	cles	11-Jul-50	n	24-6
	f	10		1-Aug-77	3-Jan-78	22.14	5.17	0.42	cle	14-May-58	n	19-3
	m	13		25-Nov-63	24-Aug-84	1082.57	252.60	20.76	ins	18-Aug-38	n	25-4
	f	8		8-Feb-82	3-Feb-89	364.57	85.07	6.99	cles	16-Nov-64	o	17-3
	m	1		18-Aug-75	28-Feb-77	80.00	18.67	1.53	cle	31-Aug-52	o	22-12
	f	10		8-Aug-78	19-Jan-79	23.43	5.47	0.45	cles	8-Mar-31	n	47-6
	f	10		14-May-77	18-Dec-77	31.14	7.27	0.60	cles	2-May-34	n	43-1
	m	13		21-Sep-55	24-Apr-85	1544.00	360.27	29.61	cle	19-Sep-24	n	31-1

	f	15		6-Aug-74	31-Aug-75	55.71	13.00	1.07	typ	6-Aug-58	n	15-12
	f	14		1-Dec-80	15-Aug-82	88.86	20.73	1.70	cles	13-Oct-60	n	20-2
	f	6		24-Aug-87	13-Nov-87	11.57	2.70	0.22	cles	9-Mar-45	n	42-6
	f	15		2-Dec-74	12-Jul-87	657.86	153.50	12.62	cles	19-Sep-37	n	37-3
	m	13		21-Mar-66	15-Jan-86	1034.29	241.33	19.84	cle	16-Sep-25	n	40-7
	m	10		4-Aug-75	18-Sep-88	684.86	159.80	13.13	pur	23-Jun-56	n	19-2
	m	13		2-Feb-70	24-Sep-84	764.00	178.27	14.65	sto	25-Sep-19	n	50-5
	m	13		18-Sep-67	28-Dec-84	901.57	210.37	17.29	ins	30-Dec-19	n	47-9
	m	10		14-Jul-75	25-Mar-77	88.57	20.67	1.70	cle	19-May-33	n	42-2
	m	13		4-Aug-69	9-Jul-78	465.86	108.70	8.93	tech	28-Mar-53	n	16-5
	f	10		8-Jan-79	18-Sep-81	140.57	32.80	2.70	cles	22-Jun-58	n	20-7
	f	13		3-Sep-73	28-Jan-79	281.86	65.77	5.41	cles	20-Sep-56	n	16-12
	f	10		21-Jul-75	28-Mar-79	192.29	44.87	3.69	cles	6-Sep-57	n	17-11
	f	14		20-Nov-84	17-Jun-85	29.86	6.97	0.57	cles	7-Mar-47	n	37-9
	m	13		29-Jul-74	24-Feb-78	186.57	43.53	3.58	cle	17-Aug-52	n	21-12
	m	13		4-Dec-72	31-Mar-83	538.43	125.63	10.33	man	29-Jan-28	n	44-11
	m	13		5-Feb-74	8-Jan-84	517.71	120.80	9.93	man	12-Feb-20	n	53-12
	f	10		17-Oct-79	15-Jan-80	12.86	3.00	0.25	pur	27-May-57	n	22-5
	f	10		13-Apr-81	3-Oct-82	76.86	17.93	1.47	cles	26-Feb-56	n	25-2
	m	15		20-Jan-75	24-Jan-80	261.43	61.00	5.01	man	13-Nov-30	n	44-3
	m	2		9-Jan-84	31-Oct-88	251.00	58.57	4.81	esti	1-Nov-23	n	60-3
	f	10		23-May-83	9-Sep-83	15.57	3.63	0.30	cles	27-Apr-65	n	18-1
	f	10		13-Aug-85	29-Sep-85	6.71	1.57	0.13	cles	1-Feb-68	n	17-7
	m	1		23-Apr-79	30-Apr-82	157.57	36.77	3.02	cle	21-Sep-46	n	32-8
	f	15		27-Oct-75	4-Jun-82	344.57	80.40	6.61	cle	23-Jul-57	n	18-4
	f	14		18-Feb-80	16-Jan-81	47.57	11.10	0.91	cles	25-Jul-56	n	23-7
	m	7		13-Jun-88	7-Oct-88	16.57	3.87	0.32	lab	4-Jan-68	n	20-6
	f	15		14-Sep-87	18-Sep-87	0.57	0.13	0.01	clean	15-Jan-26	n	61-8
	m	15		23-May-88	16-Sep-88	16.57	3.87	0.32	lab	26-Jul-65	n	22-10
	m	13		25-Apr-74	28-Aug-76	122.29	28.53	2.35	joi	5-Feb-53	c	21-3
	m	7		30-Apr-84	9-Dec-88	240.57	56.13	4.61	lab	23-Aug-62	n	21-9
	m	10		9-Mar-87	5-Jun-87	12.57	2.93	0.24	bri	14-Jul-27	c	59-8
	m	10		13-Aug-84	11-Sep-87	160.57	37.47	3.08	pai	3-Aug-68	o	16-1
	f	7		20-Jun-88	2-Sep-88	10.57	2.47	0.20	lab	21-Mar-69	n	19-4
	m	10		29-Jun-87	31-Jul-87	4.57	1.07	0.09	lab	29-Jun-67	n	19-12
	m	7		16-May-88	19-Aug-88	13.57	3.17	0.26	lab	9-Aug-67	n	20-10
	m	10		16-Aug-76	3-Sep-76	2.57	0.60	0.05	lab	19-Jun-57	n	19-2

	m	13		31-May-65	12-Jan-88	1180.14	275.37	22.63	lab	1-Jul-38	n	26-11
	m	13		6-Aug-73	28-Sep-87	738.00	172.20	14.15	pai	25-Jun-57	n	16-2
	m	6		5-May-87	2-May-88	51.86	12.10	0.99	gro	30-Jan-65	n	22-4
	m	8		5-Aug-80	28-Oct-88	429.43	100.20	8.24	gar	19-Aug-64	o	15-12
	m	7		10-Jun-85	9-Aug-85	8.57	2.00	0.16	lab	27-Dec-65	n	19-6
	m	15		19-May-75	30-Nov-88	706.29	164.80	13.55	lab	5-Sep-48	n	26-9
	m	10		4-Aug-81	30-Jul-87	312.29	72.87	5.99	joi	19-Feb-64	o	17-6
	m	10		11-Aug-80	12-Aug-88	417.57	97.43	8.01	lab	29-Jun-58	n	22-2
	m	14		7-Feb-83	4-Sep-87	238.57	55.67	4.58	sca	16-Dec-60	n	22-2
	m	15		27-Oct-75	27-Sep-85	517.57	120.77	9.93	gro	23-May-51	n	24-6
	m	7		19-May-86	5-Sep-86	15.57	3.63	0.30	lab	16-Feb-66	n	20-4
	f	15		5-Jan-87	20-Feb-87	6.57	1.53	0.13	cleaner	15-Jun-61	n	25-7
	m	10		8-Feb-88	6-May-88	12.57	2.93	0.24	gro	12-Jan-64	n	24-1
	m	8		13-Aug-84	8-Feb-88	182.00	42.47	3.49	gar	7-Jun-68	o	16-3
	m	7		8-Jun-87	11-Sep-87	13.57	3.17	0.26	lab	17-Jul-68	n	18-11
	m	13		11-Sep-61	9-May-86	1286.57	300.20	24.67	pai	26-Apr-46	c	15-5
	f	15		11-Apr-88	28-Oct-88	28.57	6.67	0.55	cleaner	20-Nov-32	n	55-5
	m	10		30-May-88	9-Sep-88	14.57	3.40	0.28	lab	20-Oct-67	n	20-8
	m	8		3-Aug-87	29-Apr-88	38.57	9.00	0.74	bri	3-May-71	o	16-4
	m	15		5-May-87	7-Dec-88	83.14	19.40	1.59	bri	8-Dec-23	c	63-5
	m	8		22-Aug-83	27-Jul-88	257.29	60.03	4.93	joi	21-Oct-66	o	16-10
	m	8		10-Aug-78	1-Feb-85	338.14	78.90	6.48	gar	6-May-61	n	17-4
	m	15		30-Oct-79	21-Aug-86	355.29	82.90	6.81	lab	19-Oct-35	n	44-1
	m	10		22-Aug-83	26-Sep-88	266.00	62.07	5.10	joi	9-Nov-65	o	17-10
	f	7		1-Apr-86	16-Sep-88	128.43	29.97	2.46	cleaner	6-Aug-42	n	43-8
	m	10		6-Aug-79	7-Oct-88	478.57	111.67	9.18	bri	19-Feb-63	n	16-6
	m	1		7-Jul-86	29-May-87	46.57	10.87	0.89	roo	17-Jan-51	n	35-6
	f	7		13-Jun-88	2-Sep-88	11.57	2.70	0.22	gro	3-Feb-69	n	19-5
	m	13		6-Aug-73	1-Apr-88	764.57	178.40	14.66	pla	29-Mar-57	c	16-5
	m	8		3-Aug-87	26-Aug-88	55.57	12.97	1.07	gar	22-Feb-71	o	16-6
	m	10		9-Mar-87	5-Jun-87	12.57	2.93	0.24	bri	6-Mar-65	c	22-1
	m	10		29-Jul-85	7-Oct-87	114.29	26.67	2.19	lab	27-Sep-60	n	24-10
	m	15		4-Apr-78	26-Sep-88	546.86	127.60	10.49	joi	27-Sep-23	c	54-7
	m	7		25-May-88	19-Aug-88	12.29	2.87	0.24	lab	25-Jul-69	n	18-10
	f	7		13-Jun-88	9-Sep-88	12.57	2.93	0.24	lab	6-Sep-69	n	18-10
	m	7		13-Jun-88	9-Sep-88	12.57	2.93	0.24	lab	3-Oct-69	n	18-9
	m	10		15-Dec-75	5-Jul-88	655.14	152.87	12.56	joi	28-Apr-28	n	47-8

	m	10		16-Aug-78	28-Mar-86	397.29	92.70	7.62	pai	16-Nov-61	n	16-9
	m	13		6-Apr-70	29-Nov-88	973.14	227.07	18.66	gro	25-Mar-31	n	39-1
	m	8		5-Aug-85	5-Aug-88	156.57	36.53	3.00	pla	22-Apr-69	o	16-4
	m	8		3-Aug-87	15-Jul-88	49.57	11.57	0.95	gar	11-May-71	o	16-3
	m	7		24-Aug-87	22-Sep-88	56.43	13.17	1.08	gar	28-Apr-68	n	19-4
	m	6		5-Apr-88	20-May-88	6.43	1.50	0.12	lab	20-Jan-65	n	23-3
	m	10		10-Sep-79	21-Aug-87	414.57	96.73	7.95	joi	8-Oct-62	o	16-12
	m	13		9-May-55	4-Sep-87	1686.57	393.53	32.35	plu	2-Aug-28	c	26-10
	m	8		7-Aug-78	19-Nov-87	484.43	113.03	9.29	bri	27-Apr-62	o	16-4
	m	15		5-Mar-84	10-Dec-86	144.29	33.67	2.77	gro	15-Dec-63	n	20-3
	m	13		22-Jan-73	5-Dec-88	828.00	193.20	15.88	gro	2-Sep-46	n	26-5
	m	15		2-Mar-87	3-Jul-87	17.57	4.10	0.34	gro	28-Jul-62	n	24-8
	m	8		13-Aug-84	8-Apr-88	190.57	44.47	3.65	roo	30-Mar-68	o	16-5
	m	10		8-Feb-88	6-May-88	12.57	2.93	0.24	gro	9-Jun-66	n	21-8
	m	13		7-Aug-67	29-Jan-88	1068.57	249.33	20.49	joi	6-Jan-24	c	43-8
	f	15		25-Jun-84	13-Nov-87	176.57	41.20	3.39	lab	27-May-67	n	17-1
	m	15		2-Jun-87	30-Oct-87	21.43	5.00	0.41	gro	30-Jun-68	n	18-12
	m	10		5-Feb-79	23-Sep-88	502.57	117.27	9.64	gro	3-Aug-32	n	46-7
	m	15		4-Jul-88	30-Sep-88	12.57	2.93	0.24	lab	7-Apr-68	n	20-3
	f	7		1-Jun-87	28-Aug-87	12.57	2.93	0.24	lab	17-May-68	n	19-1
	m	10		13-Mar-78	28-Mar-86	419.57	97.90	8.05	pai	14-May-48	c	29-10
	m	7		11-May-87	18-Sep-87	18.57	4.33	0.36	lab	11-Jul-66	n	20-10
	m	10		24-Oct-83	20-Apr-84	25.57	5.97	0.49	plu	11-Jun-62	c	21-5
	m	15		10-May-82	1-Aug-86	220.57	51.47	4.23	dri	7-May-63	n	19-1
	m	8		13-Aug-79	30-Sep-88	476.57	111.20	9.14	roo	3-Apr-63	n	16-5
	m	10		6-Jul-87	30-Jul-87	3.43	0.80	0.07	cle	25-Feb-70	o	17-5
	m	15		13-Apr-82	16-May-86	213.43	49.80	4.09	gar	8-Nov-48	n	33-6
	m	15		23-May-88	30-Sep-88	18.57	4.33	0.36	lab	3-Feb-71	n	17-4
	m	15		3-May-77	7-Aug-87	535.43	124.93	10.27	sca	10-Aug-23	n	53-9
	m	10		14-Feb-83	24-May-85	118.57	27.67	2.27	pla	2-Sep-55	n	27-6
	m	15		20-Jun-88	23-Sep-88	13.57	3.17	0.26	lab	26-Jul-69	n	18-11
	f	14		16-Feb-87	8-Apr-88	59.57	13.90	1.14	cleaner	19-Feb-34	n	52-12
	m	13		15-May-72	30-Jun-87	789.14	184.13	15.13	gar	1-Jul-22	n	49-11
	m	7		22-Jun-87	28-Aug-87	9.57	2.23	0.18	lab	13-Dec-68	n	18-7
	m	7		13-Feb-78	6-Oct-83	294.43	68.70	5.65	lab	5-Oct-54	n	23-5
	f	15		7-Aug-87	16-Sep-88	58.00	13.53	1.11	lab	14-Sep-90	n	########
	m	15		27-Jun-88	12-Aug-88	6.57	1.53	0.13	lab	21-May-71	n	17-2

	m	10		30-Oct-78	14-Apr-88	493.43	115.13	9.46	bri	27-Sep-56	c		22-2
	f	15		28-Mar-83	25-Mar-88	260.57	60.80	5.00	cat	25-Dec-59	n		23-4
	m	13		4-Apr-54	27-Sep-88	1799.29	419.83	34.51	gro	25-Jul-30	n		23-9
	m	13		4-Mar-56	19-Dec-88	1711.14	399.27	32.82	gro	31-Jan-28	n		28-2
	m	13		17-Apr-72	4-Apr-88	833.00	194.37	15.98	pai	22-Feb-47	c		25-2
	m	10		27-Jun-88	23-Sep-88	12.57	2.93	0.24	lab	21-Aug-68	n		19-11
	m	15		23-Oct-78	11-Dec-87	476.57	111.20	9.14	gro	14-Dec-22	n		55-11
	m	13		3-Apr-53	13-Apr-87	1775.43	414.27	34.05	lab	8-Dec-26	n		26-4
	m	7		6-Sep-83	4-Jan-87	173.71	40.53	3.33	joi	5-Dec-63	c		19-10
	m	10		3-Aug-87	1-Mar-88	30.14	7.03	0.58	pai	20-Oct-70	o		16-10
	m	13		28-May-51	30-Oct-87	1900.57	443.47	36.45	pla	3-Jan-24	c		27-5
	m	8		5-Aug-78	5-Jan-87	439.29	102.50	8.42	roo	3-Mar-62	o		16-6
	m	10		29-Aug-77	7-Oct-88	579.57	135.23	11.12	ele	1-Nov-60	o		16-10
	m	13		16-Dec-64	3-Jan-84	993.86	231.90	19.06	dri	30-Apr-21	n		43-8
	m	13		30-May-50	3-Sep-81	1631.29	380.63	31.28	cha	4-Sep-22	n		27-9
	m	10		5-Aug-80	15-Oct-84	218.86	51.07	4.20	plu	1-Mar-63	o		17-6
	m	10		4-Aug-81	19-Sep-88	371.86	86.77	7.13	ele	11-Apr-64	o		17-4
	m	10		16-Aug-82	14-Oct-88	321.57	75.03	6.17	ele	15-Dec-65	o		16-8
	m	15		1-Aug-83	4-Nov-88	274.57	64.07	5.27	lab	23-Sep-46	n		36-11
	m	10		25-Aug-80	5-Aug-88	414.57	96.73	7.95	lab	4-Sep-59	n		20-12
	m	10		23-May-88	19-Aug-88	12.57	2.93	0.24	lab	26-Aug-71	n		16-9
	m	10		19-Mar-79	5-Jul-88	485.14	113.20	9.30	joi	9-Jun-37	c		41-10
	m	8		13-Aug-84	18-Nov-88	222.57	51.93	4.27	joi	1-Aug-68	o		16-1
	m	13		24-Jul-67	5-Oct-88	1106.29	258.13	21.22	gro	13-Jan-34	n		33-7
	m	13		18-Nov-57	24-Apr-78	1066.00	248.73	20.44	lab	25-Apr-13	n		44-7
	m	13		31-Mar-59	22-Jul-82	1216.29	283.80	23.33	pla	23-Jul-17	c		41-9
	m	13		3-Nov-69	28-Feb-79	486.29	113.47	9.33	gro	1-Mar-15	n		54-9
	m	7		24-Feb-75	18-Jun-76	68.57	16.00	1.32	joi	15-May-40	c		34-10
	m	13		2-Sep-69	15-Nov-76	375.86	87.70	7.21	plu	31-Oct-27	c		41-11
	m	13		5-Nov-51	6-Feb-76	1265.57	295.30	24.27	sto	3-Apr-11	n		40-8
	m	10		10-Nov-75	2-Mar-87	590.00	137.67	11.32	gro	16-Jun-53	n		22-5
	m	10		9-May-78	15-Oct-81	179.29	41.83	3.44	pai	25-Nov-30	c		47-6
	m	13		18-Oct-65	8-May-87	1124.57	262.40	21.57	sto	21-Jan-28	n		37-9
	m	13		21-May-54	5-Dec-87	1750.14	408.37	33.56	roo	15-Aug-23	c		30-10
	m	14		5-Aug-85	27-Feb-87	81.57	19.03	1.56	joi	29-Jun-64	c		21-2
	m	10		26-May-80	26-Feb-88	404.57	94.40	7.76	lab	25-Aug-55	n		24-10
	m	13		28-Nov-66	2-Sep-77	561.57	131.03	10.77	gro	18-Dec-48	n		17-12

	m	13		28-Mar-67	31-Jan-75	409.43	95.53	7.85	bri	8-Dec-13	c	53-4
	m	13		14-Jun-65	28-Feb-75	506.57	118.20	9.72	plu	1-Jul-49	c	15-12
	m	13		24-Nov-72	6-Sep-81	458.29	106.93	8.79	dri	5-May-26	n	46-7
	m	13		18-Feb-63	14-Sep-75	655.86	153.03	12.58	joi	30-Sep-15	c	47-5
	m	13		18-Oct-71	8-Nov-78	368.29	85.93	7.06	lab	10-Nov-22	n	48-12
	m	10		6-Jul-87	6-Jul-87	0.00	0.00	0.00	lab	2-Apr-69	n	18-4
	m	15		8-Sep-75	4-Feb-77	73.57	17.17	1.41	joi	16-Apr-47	c	28-5
	m	10		4-Aug-81	3-Apr-87	295.43	68.93	5.67	gar	4-Oct-64	h	16-10
	m	13		6-Aug-73	16-Dec-77	227.57	53.10	4.36	plu	17-Dec-56	c	16-8
	m	10		2-Aug-76	9-Jun-78	96.57	22.53	1.85	lab	20-Apr-57	n	19-4
	m	13		24-Apr-49	19-Feb-88	2025.71	472.67	38.85	joi	25-Apr-24	c	24-12
	m	13		26-Mar-52	1-Mar-85	1718.29	400.93	32.95	plu	26-Nov-24	c	27-4
	m	10		15-Dec-75	30-Sep-77	93.57	21.83	1.79	joi	12-Nov-52	c	23-2
	m	13		28-Mar-66	24-Mar-81	782.14	182.50	15.00	joi	3-Sep-46	c	19-7
	m	10		22-Oct-79	3-Jul-81	88.57	20.67	1.70	pai	14-Jun-38	c	41-5
	m	13		30-May-55	20-Jul-88	1729.29	403.50	33.16	lab	25-Sep-26	n	28-9
	m	10		23-Mar-78	28-Nov-80	140.14	32.70	2.69	pai	3-Jul-47	c	30-9
	m	13		30-May-55	20-Feb-84	1499.00	349.77	28.75	joi	11-Jan-22	c	33-5
	m	6		30-May-88	12-Aug-88	10.57	2.47	0.20	lab	27-Aug-66	n	21-10
	m	15		2-Jun-75	16-Dec-76	80.43	18.77	1.54	gro	24-Apr-15	n	60-2
	m	13		5-Feb-73	23-Oct-87	767.57	179.10	14.72	gro	12-Nov-34	n	38-3
	f	13		3-Dec-73	25-Mar-82	433.43	101.13	8.31	cat	4-Oct-26	n	47-3
	m	10		18-Apr-88	9-Sep-88	20.57	4.80	0.39	lab	16-Mar-60	n	28-2
	m	13		7-Jun-66	17-Aug-78	636.29	148.47	12.20	pai	29-Sep-45	c	20-9
	m	13		9-Jan-67	25-Nov-88	1141.57	266.37	21.89	plu	23-Nov-50	c	16-2
	m	7		31-Oct-77	19-Jan-83	272.29	63.53	5.22	bri	4-Mar-33	c	44-8
	f	10		18-Jun-79	9-Oct-87	433.57	101.17	8.32	cleaner	3-Oct-37	n	41-9
	m	10		2-Jun-80	4-Sep-87	378.57	88.33	7.26	lab	6-Sep-22	n	57-9
	m	8		13-Aug-84	16-Mar-87	135.00	31.50	2.59	plu	3-Aug-68	o	16-1
	m	13		29-Apr-74	22-Sep-78	229.57	53.57	4.40	gro	25-May-51	n	22-12
	m	7		25-Aug-87	2-Oct-87	5.43	1.27	0.10	lab	8-Jun-66	n	21-3
	m	13		4-Apr-51	18-Mar-83	1667.29	389.03	31.98	lab	24-Apr-22	n	28-12
	m	7		13-Jun-88	9-Sep-88	12.57	2.93	0.24	lab	3-Oct-66	n	21-9
	m	15		16-Mar-87	12-Jun-87	12.57	2.93	0.24	joi	4-Nov-48	c	38-5
	m	10		6-Mar-78	20-Nov-81	193.57	45.17	3.71	lab	12-Jul-52	n	25-8
	f	15		29-Feb-88	7-Mar-88	1.00	0.23	0.02	cleaner	14-Aug-44	n	43-7
	m	10		22-Oct-79	23-Dec-87	426.29	99.47	8.18	pai	2-Aug-37	c	42-3

	m	13		7-Mar-53	28-May-77	1264.00	294.93	24.24	wmach	29-May-12	c	40-10
	m	7		22-Jun-87	20-Jun-88	52.00	12.13	1.00	lab	29-Oct-66	n	20-8
	m	10		6-Sep-82	13-May-88	296.57	69.20	5.69	joi	17-Apr-62	o	20-5
	m	13		15-Oct-62	20-May-88	1335.57	311.63	25.61	gro	2-Jul-46	n	16-4
	m	13		30-Apr-58	13-Jul-87	1523.71	355.53	29.22	gro	24-Jan-40	n	18-4
	m	10		21-Mar-83	17-Nov-87	243.14	56.73	4.66	lab	14-Oct-55	n	27-6
	m	14		24-Mar-86	19-Dec-86	38.57	9.00	0.74	lab	16-Feb-61	n	25-2
	m	8		16-Aug-78	28-Mar-86	397.29	92.70	7.62	pai	27-Mar-61	o	17-5
	m	15		19-Apr-78	11-Jun-80	112.00	26.13	2.15	pla	2-May-57	c	20-12
	m	15		9-Nov-87	9-Nov-88	52.29	12.20	1.00	gro	27-Sep-69	n	18-2
	m	15		21-Nov-83	15-Dec-87	212.14	49.50	4.07	cha	5-May-62	n	21-7
	m	10		28-Apr-80	30-Oct-87	391.57	91.37	7.51	dri	28-Nov-36	n	43-5
	m	7		9-Jun-86	1-Jun-87	51.00	11.90	0.98	lab	25-Jun-65	n	20-12
	m	8		13-Aug-84	18-Sep-87	161.57	37.70	3.10	pai	15-May-68	o	16-3
	m	7		6-Jun-88	2-Sep-88	12.57	2.93	0.24	lab	10-Sep-70	n	17-9
	m	10		2-Mar-87	14-Dec-87	41.00	9.57	0.79	gro	5-Dec-41	n	45-3
	f	15		27-Jun-88	26-Aug-88	8.57	2.00	0.16	gro	26-Dec-69	n	18-7
	m	13		6-Mar-61	16-Dec-88	1449.57	338.23	27.80	gro	3-Jan-37	n	24-3
	m	10		20-Feb-78	4-Sep-87	497.57	116.10	9.54	sca	29-Jan-56	n	22-1
	m	13		12-Feb-73	12-Feb-88	782.57	182.60	15.01	cha	7-Sep-29	n	43-6
	m	6		16-Feb-87	8-May-87	11.57	2.70	0.22	bri	30-Dec-67	c	19-2
	m	10		4-Aug-81	26-Oct-84	168.43	39.30	3.23	pai	30-Aug-65	o	15-12
	m	7		22-Jun-87	18-Sep-87	12.57	2.93	0.24	lab	23-Sep-68	n	18-9
	m	13		23-Nov-70	21-Jun-88	917.14	214.00	17.59	roo	3-Jun-25	n	45-6
	m	8		5-Aug-85	26-Aug-88	159.57	37.23	3.06	joi	11-Aug-69	o	15-12
	m	7		20-Jun-88	9-Sep-88	11.57	2.70	0.22	lab	12-Jun-69	n	19-1
	m	10		3-Mar-76	16-Jan-82	306.43	71.50	5.88	joi	22-Dec-49	c	26-3
	m	10		22-Aug-83	7-May-87	193.43	45.13	3.71	bri	9-Jun-67	n	16-3
	m	10		26-Nov-79	21-Feb-83	169.00	39.43	3.24	pai	30-Jul-62	n	17-4
	m	15		5-Mar-84	31-May-85	64.57	15.07	1.24	gro	17-Feb-66	n	18-1
	m	13		1-Jul-74	16-Jan-87	654.57	152.73	12.55	gro	8-Nov-42	n	31-8
	m	10		12-Jan-76	28-Mar-88	637.00	148.63	12.22	joi	30-Jun-32	c	43-7
	m	10		12-Apr-78	5-Dec-87	503.43	117.47	9.65	pla	30-May-26	c	51-11
	m	15		13-Jul-87	2-Oct-87	11.57	2.70	0.22	lab	23-Oct-69	n	17-9
	m	14		22-Aug-83	2-Oct-87	214.57	50.07	4.12	pai	30-Sep-66	o	16-11
	f	14		11-Apr-88	17-Jun-88	9.57	2.23	0.18	cleaner	29-Jun-48	n	39-10
	f	10		27-Apr-87	12-Jun-87	6.57	1.53	0.13	cleaner	8-Aug-52	n	34-9

	m	10		6-Aug-79	19-Mar-82	136.57	31.87	2.62	plu	5-Aug-63	o	16-1
	m	10		25-Jan-82	21-Nov-87	303.71	70.87	5.82	lab	22-Nov-22	n	59-3
	m	10		22-Aug-83	21-Aug-87	208.57	48.67	4.00	fitter	20-Feb-66	o	17-7
	m	13		11-Jan-50	4-May-88	1999.00	466.43	38.34	joi	5-May-23	c	26-9
	m	14		4-Jul-83	27-Sep-88	273.14	63.73	5.24	sto	18-Dec-53	n	29-7
	m	15		16-Mar-87	12-Jun-87	12.57	2.93	0.24	joi	6-Sep-62	c	24-7
	m	10		1-Sep-75	27-Jun-86	564.57	131.73	10.83	pai	22-Jun-59	c	16-3
	m	15		1-Apr-87	26-Jun-87	12.29	2.87	0.24	joi	1-Aug-58	c	28-8
	m	10		10-Feb-86	7-Nov-86	38.57	9.00	0.74	joi	23-Mar-49	c	36-11
	m	10		12-Dec-77	14-Apr-86	435.00	101.50	8.34	ele	16-Oct-39	c	38-2
	m	10		24-Apr-78	17-Nov-80	134.00	31.27	2.57	plu	28-Sep-48	c	29-7
	m	10		29-Jan-79	28-Mar-86	373.57	87.17	7.16	pai	10-Mar-39	c	39-11
	m	13		11-May-70	11-Aug-86	848.00	197.87	16.26	joi	2-Feb-32	c	38-4
	m	13		11-May-57	28-Apr-87	1563.43	364.80	29.98	bri	13-Sep-26	c	30-8
	m	10		14-Feb-77	7-Aug-87	546.57	127.53	10.48	plu	27-Sep-28	c	48-5
	f	15		20-Nov-84	26-Sep-86	96.43	22.50	1.85	clean	6-Jul-44	n	40-5
	m	10		28-Apr-80	16-Sep-85	281.00	65.57	5.39	sto	21-Jul-26	n	53-10
	m	15		25-May-87	4-Sep-87	14.57	3.40	0.28	lab	24-Apr-69	n	18-1
	m	8		7-Aug-78	28-Aug-87	472.57	110.27	9.06	pai	10-Feb-61	n	17-6
	m	7		23-Jun-86	19-Sep-86	12.57	2.93	0.24	lab	18-Jan-67	n	19-6
	m	15		2-Mar-87	15-May-87	10.57	2.47	0.20	gro	13-Nov-63	n	23-4
	m	10		15-Sep-75	23-Dec-88	692.57	161.60	13.28	gro	26-Dec-23	n	51-9
	m	10		17-Oct-88	2-Dec-88	6.57	1.53	0.13	joi	5-Feb-31	c	57-9
	m	14		6-Jun-88	2-Sep-88	12.57	2.93	0.24	lab	25-Apr-70	n	18-2
	m	10		15-Mar-76	13-May-88	634.57	148.07	12.17	bri	3-Aug-24	c	51-8
	m	13		16-Dec-74	6-May-88	698.57	163.00	13.40	dri	9-Dec-23	n	51-1
	m	14		16-May-88	12-Dec-88	30.00	7.00	0.58	lab	28-Oct-64	n	23-7
	m	10		5-Aug-85	13-Feb-88	131.71	30.73	2.53	gar	5-Oct-68	o	16-10
	m	7		13-Jun-88	23-Sep-88	14.57	3.40	0.28	lab	4-Feb-68	n	20-5
	m	11		6-Aug-79	22-Nov-85	328.57	76.67	6.30	pai	29-May-63	n	16-3
	f	15		30-Sep-86	29-Jun-87	38.86	9.07	0.75	clean	14-Apr-40	n	46-6
	m	13		19-Aug-74	15-Nov-88	743.14	173.40	14.25	joi	15-Nov-57	c	16-10
	m	10		5-Aug-80	29-Aug-86	316.43	73.83	6.07	joi	6-May-64	o	16-3
	m	7		26-Sep-86	13-Mar-87	24.00	5.60	0.46	bri	25-Apr-36	c	50-6
	m	10		22-Aug-83	29-Apr-88	244.57	57.07	4.69	gar	16-Jan-67	o	16-8
	m	6		8-Feb-88	6-May-88	12.57	2.93	0.24	gro	21-Jan-69	n	19-1
	m	7		22-Jun-87	18-Sep-87	12.57	2.93	0.24	lab	16-Nov-67	n	19-8

	m	10		8-Feb-88	6-May-88	12.57	2.93	0.24	gro	16-Feb-43	n	44-12
	m	10		4-Aug-81	24-Jul-87	311.43	72.67	5.97	joi	9-Dec-64	h	16-8
	m	15		8-Jun-87	9-Jun-87	0.14	0.03	0.00	lab	1-Mar-68	n	19-4
	m	10		8-Feb-88	6-May-88	12.57	2.93	0.24	gro	2-Oct-63	n	24-5
	m	13		10-Apr-68	13-Sep-88	1065.86	248.70	20.44	lab	26-Feb-26	n	42-2
	m	10		1-May-78	27-May-86	421.14	98.27	8.08	plu	5-Mar-38	c	40-2
	m	15		20-Jun-88	2-Sep-88	10.57	2.47	0.20	lab	3-Sep-70	n	17-10
	m	7		19-May-86	27-Mar-87	44.57	10.40	0.85	lab	24-Jan-65	n	21-4
	m	10		16-Oct-78	8-Apr-80	77.14	18.00	1.48	bri	16-Oct-51	c	26-12
	m	15		9-Jan-78	16-May-86	435.57	101.63	8.35	dri	25-Jun-57	n	20-7
	m	10		27-Jun-88	9-Sep-88	10.57	2.47	0.20	gro	26-Feb-71	n	17-5
	m	10		13-Feb-84	27-Feb-87	158.57	37.00	3.04	bri	6-Mar-63	c	20-12
	f	7		13-Jun-88	23-Sep-88	14.57	3.40	0.28	lab	25-Nov-69	n	18-7
	m	13		6-Aug-73	16-Jan-77	179.86	41.97	3.45	bri	18-Aug-57	n	15-12
	m	13		30-Nov-64	9-May-75	544.57	127.07	10.44	cha	30-Mar-15	n	49-9
	m	10		29-Aug-77	29-Aug-80	156.57	36.53	3.00	joi	30-Jun-60	o	17-2
	m	13		13-Nov-67	28-Mar-86	958.57	223.67	18.38	pai	25-Jun-25	c	42-5
	m	13		1-Apr-74	11-Jun-76	114.57	26.73	2.20	lab	28-Dec-34	n	39-4
	m	13		2-Aug-71	11-Sep-76	266.71	62.23	5.12	bri	10-Aug-55	c	15-12
	m	15		14-Jun-75	12-Sep-75	12.86	3.00	0.25	lab	16-Jul-56	n	18-11
	m	13		17-Jun-63	28-Mar-86	1188.57	277.33	22.79	pai	25-Jun-32	c	30-12
	m	13		1-Jun-70	24-Mar-75	251.00	58.57	4.81	gro	25-Mar-10	n	60-3
	m	15		24-Aug-52	27-Sep-91	2039.71	475.93	39.12	lab	11-Aug-30	n	22-1
	m	15		29-Sep-89	27-Sep-91	104.00	24.27	1.99	sca	12-Oct-59	n	29-12
	m	8		2-Jul-83	27-Sep-91	429.86	100.30	8.24	joi	14-Nov-66	o	16-8
	m	15		20-Apr-64	27-Sep-91	1431.57	334.03	27.45	bri	15-May-31	c	32-12
	m	8		7-Aug-78	27-Sep-91	685.57	159.97	13.15	joi	12-May-62	c	16-3
	m	15		16-May-75	27-Sep-91	854.00	199.27	16.38	joi	24-Apr-44	n	31-1
	m	14		6-Feb-89	27-Sep-91	137.57	32.10	2.64	bri	17-Feb-72	o	16-12
	m	15		8-Aug-88	27-Sep-91	163.57	38.17	3.14	elec	29-Oct-71	h	16-10
	m	15		25-May-89	27-Sep-91	122.14	28.50	2.34	gard	30-Jul-43	n	45-10
	m	15		25-Nov-85	27-Sep-91	304.57	71.07	5.84	gro	23-Dec-54	n	30-12
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	joi	24-Aug-46	n	37-9
	m	2		4-Mar-91	27-Sep-91	29.57	6.90	0.57	joi	21-Aug-62	c	28-7
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	elect	21-Apr-70	n	17-4
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	pay	27-Mar-37	n	38-2
	m	13		1-Mar-90	27-Sep-91	82.14	19.17	1.58	sca	21-May-67	n	22-10

	m	10		28-May-79	27-Sep-91	643.57	150.17	12.34	lab	30-Nov-61	n	17-6
	m	10		5-Aug-85	27-Sep-91	320.57	74.80	6.15	bri	13-Dec-63	c	21-8
	m	13		22-Aug-86	27-Sep-91	266.00	62.07	5.10	gro	22-Jun-60	n	26-3
	m	10		16-May-75	27-Sep-91	854.00	199.27	16.38	lab	5-Nov-39	n	35-7
	m	10		25-Mar-91	27-Sep-91	26.57	6.20	0.51	gro	18-Nov-65	n	25-5
	m	14		13-Oct-86	27-Sep-91	258.57	60.33	4.96	gro	17-Sep-43	n	43-1
	m	13		5-Mar-84	27-Sep-91	394.57	92.07	7.57	gro	23-Nov-60	n	23-4
	m	10		11-Feb-80	27-Sep-91	606.57	141.53	11.63	plu	12-Feb-59	c	20-12
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	pay	12-Jul-33	n	41-11
	m	15		16-Aug-80	27-Sep-91	579.86	135.30	11.12	joi	14-Aug-35	n	45-1
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	joi	14-Feb-34	n	41-3
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	elect	1-Apr-56	n	28-2
	m	2		25-Feb-91	27-Sep-91	30.57	7.13	0.59	joi	13-Feb-59	n	32-1
	m	10		16-Nov-81	27-Sep-91	514.57	120.07	9.87	joi	25-Nov-29	c	51-12
	m	13		1-May-80	27-Sep-91	595.14	138.87	11.41	cha	8-Sep-40	n	39-8
	m	10		25-Mar-91	27-Sep-91	26.57	6.20	0.51	plu	5-Nov-44	c	46-5
	m	10		18-Mar-91	27-Sep-91	27.57	6.43	0.53	bri	12-May-38	c	52-11
	m	13		13-Jan-88	27-Sep-91	193.29	45.10	3.71	fit	21-May-33	n	54-8
	m	6		28-Feb-90	27-Sep-91	82.29	19.20	1.58	lab	16-Nov-66	n	23-4
	m	15		14-Feb-84	27-Sep-91	397.43	92.73	7.62	joi	17-Jul-37	n	46-7
	m	10		1-Jul-91	27-Sep-91	12.57	2.93	0.24	lab	5-Oct-68	n	22-9
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	lab	30-Dec-52	n	31-5
	m	11		8-Aug-88	27-Sep-91	163.57	38.17	3.14	elect	2-Oct-71	nc	16-11
	m	2		10-Sep-90	27-Sep-91	54.57	12.73	1.05	engi	19-Jul-34	n	56-2
	m	1		7-May-90	27-Sep-91	72.57	16.93	1.39	joi	27-Jun-56	c	33-11
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	pay	14-Dec-36	n	38-6
	m	2		11-Feb-91	27-Sep-91	32.57	7.60	0.62	joi	20-Apr-59	c	31-10
	m	13		5-May-87	27-Sep-91	229.43	53.53	4.40	sto	16-Aug-50	n	36-9
	m	10		13-Jul-81	27-Sep-91	532.57	124.27	10.21	gro	27-Jul-60	n	20-12
	m	8		6-Sep-86	27-Sep-91	263.86	61.57	5.06	roo	6-Sep-70	n	15-12
	m	10		1-May-78	27-Sep-91	699.57	163.23	13.42	plu	2-Apr-35	n	43-1
	m	15		22-Oct-90	27-Sep-91	48.57	11.33	0.93	pay	3-Mar-43	n	47-8
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	gar	19-Feb-31	n	44-3
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	lab	7-Sep-56	n	27-8
	m	13		1-Dec-87	27-Sep-91	199.43	46.53	3.82	dri	24-Feb-49	n	38-10
	m	13		5-May-87	27-Sep-91	229.43	53.53	4.40	pay	5-Mar-39	n	48-3
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	joi	16-May-43	n	40-12

	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	pay	9-Oct-74	o	16-9
	m	10		13-Aug-84	27-Sep-91	371.57	86.70	7.13	plu	24-Jun-68	n	16-2
	m	7		7-Aug-91	27-Sep-91	7.29	1.70	0.14	plu	16-Sep-71	nc	19-11
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	engi	31-Aug-71	nc	16-12
	m	10		7-May-84	27-Sep-91	385.57	89.97	7.39	joi	18-Dec-44	n	39-5
	m	11		2-Jul-90	27-Sep-91	64.57	15.07	1.24	joi	28-Dec-73	h	16-7
	m	10		13-Jun-77	27-Sep-91	745.57	173.97	14.30	gar	24-Jun-60	n	16-12
	m	10		1-Jul-91	27-Sep-91	12.57	2.93	0.24	plu	14-Apr-75	s	16-3
	m	2		11-Mar-91	27-Sep-91	28.57	6.67	0.55	joi	6-Oct-59	n	31-6
	m	6		18-Mar-91	27-Sep-91	27.57	6.43	0.53	engi	3-Sep-63	c	27-7
	m	10		3-Dec-84	27-Sep-91	355.57	82.97	6.82	lab	3-Feb-42	n	42-10
	m	15		5-Aug-85	27-Sep-91	320.57	74.80	6.15	elect	5-May-68	n	17-4
	m	2		30-Jul-90	27-Sep-91	60.57	14.13	1.16	elect	26-Mar-50	c	40-5
	m	8		7-May-84	27-Sep-91	385.57	89.97	7.39	plu	19-Apr-62	c	22-1
	m	11		8-Aug-88	27-Sep-91	163.57	38.17	3.14	pay	3-Apr-72	c	16-5
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	sto	19-Jan-36	n	48-4
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	joi	27-Feb-74	c	16-5
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	elect	4-Aug-66	c	17-1
	m	10		20-Nov-67	27-Sep-91	1244.57	290.40	23.87	joi	20-Apr-52	n	15-8
	m	11		14-Aug-89	27-Sep-91	110.57	25.80	2.12	joi	29-Mar-72	h	17-5
	m	8		5-Aug-85	27-Sep-91	320.57	74.80	6.15	joi	9-May-69	n	16-3
	m	10		1-Aug-77	27-Sep-91	738.57	172.33	14.16	mec	15-Jun-60	c	17-2
	m	10		23-Mar-82	27-Sep-91	496.43	115.83	9.52	engi	20-Mar-65	c	17-1
	m	10		7-Aug-78	27-Sep-91	685.57	159.97	13.15	elect	8-Apr-62	c	16-4
	m	13		16-Aug-84	27-Sep-91	371.14	86.60	7.12	elect	5-Jun-62	c	22-3
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	joi	16-Feb-72	c	16-6
	m	1		1-Jul-91	27-Sep-91	12.57	2.93	0.24	pla	17-Feb-62	n	29-5
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	joi	20-Nov-57	c	26-6
	m	11		2-May-89	27-Sep-91	125.43	29.27	2.41	joi	13-May-69	nc	19-12
	m	10		16-Jul-91	27-Sep-91	10.43	2.43	0.20	lab	29-Nov-61	n	29-8
	m	13		5-May-87	27-Sep-91	229.43	53.53	4.40	plu	25-Jan-50	c	37-4
	m	13		29-Jan-79	27-Sep-91	660.57	154.13	12.67	joi	21-Jan-28	c	51-1
	m	15		25-Feb-91	27-Sep-91	30.57	7.13	0.59	plu	13-May-66	n	24-10
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	pay	7-Oct-37	n	37-8
	m	8		5-Aug-85	27-Sep-91	320.57	74.80	6.15	pla	22-Mar-68	n	17-5
	m	15		4-May-91	27-Sep-91	20.86	4.87	0.40	roo	11-Oct-57	n	33-7
	m	7		21-Jan-91	27-Sep-91	35.57	8.30	0.68	roo	22-Dec-52	n	38-1

	m	10		2-Jul-90	27-Sep-91	64.57	15.07	1.24	pay	6-Nov-73	n	16-8
	m	6		14-Jan-91	27-Sep-91	36.57	8.53	0.70	pay	30-Aug-47	c	43-5
	m	8		7-May-84	27-Sep-91	385.57	89.97	7.39	elect	7-Nov-60	c	23-6
	m	10		3-Dec-90	27-Sep-91	42.57	9.93	0.82	gro	28-Mar-48	n	42-9
	m	14		15-Aug-86	27-Sep-91	267.00	62.30	5.12	pla	29-Jan-29	c	57-7
	m	2		22-Oct-90	27-Sep-91	48.57	11.33	0.93	pay	13-Oct-67	c	23-1
	m	14		16-Feb-87	27-Sep-91	240.57	56.13	4.61	sto	8-Feb-52	n	35-1
	m	13		6-Sep-82	27-Sep-91	472.57	110.27	9.06	gro	6-Nov-38	n	43-10
	m	10		1-Jul-91	27-Sep-91	12.57	2.93	0.24	roo	22-Apr-75	o	16-3
	m	10		20-May-91	27-Sep-91	18.57	4.33	0.36	bri	5-Nov-68	h	22-7
	m	13		5-May-87	27-Sep-91	229.43	53.53	4.40	plu	2-May-56	n	31-1
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	plu	21-Oct-70	n	16-10
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	joi	14-Jan-71	n	16-7
	m	2		14-Jan-91	27-Sep-91	36.57	8.53	0.70	pay	27-Sep-59	n	31-4
	m	10		17-Oct-77	27-Sep-91	727.57	169.77	13.95	engi	27-Jun-60	h	17-4
	m	15		12-Mar-87	27-Sep-91	237.14	55.33	4.55	engi	6-Mar-69	n	18-1
	m	11		2-Jul-90	27-Sep-91	64.57	15.07	1.24	pla	18-Dec-73	o	16-7
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	joi	11-Dec-70	h	16-8
	m	13		14-Jul-75	27-Sep-91	845.57	197.30	16.22	elect	31-Jan-54	c	21-6
	m	10		3-Nov-86	27-Sep-91	255.57	59.63	4.90	sto	5-Jun-32	n	54-5
	m	1		22-Oct-90	27-Sep-91	48.57	11.33	0.93	pay	1-Nov-65	o	24-12
	m	10		5-Jan-76	27-Sep-91	820.57	191.47	15.74	plu	5-Jan-60	n	15-12
	m	10		29-Jul-91	27-Sep-91	8.57	2.00	0.16	pay	28-Jun-75	o	16-1
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	lab	8-Dec-33	n	50-5
	m	13		20-Oct-80	27-Sep-91	570.57	133.13	10.94	gro	7-Dec-35	n	44-11
	m	14		24-Mar-86	27-Sep-91	287.57	67.10	5.52	lab	18-Dec-36	n	49-4
	m	8		13-Mar-84	27-Sep-91	393.43	91.80	7.55	engi	22-Mar-67	c	16-12
	m	10		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	4-Jul-75	h	15-12
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	joi	10-Mar-59	c	25-2
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	joi	15-Apr-29	c	46-1
	m	13		30-Jul-80	27-Sep-91	582.29	135.87	11.17	lab	22-Aug-43	n	36-12
	f	15		19-Jun-91	27-Sep-91	14.29	3.33	0.27	gro	23-Aug-71	n	19-10
	m	13		28-Apr-87	27-Sep-91	230.43	53.77	4.42	joi	17-Aug-55	n	31-9
	m	13		5-May-87	27-Sep-91	229.43	53.53	4.40	pay	6-Aug-59	n	27-9
	m	11		11-Aug-86	27-Sep-91	267.57	62.43	5.13	plu	5-Aug-70	n	16-1
	m	13		13-Jan-88	27-Sep-91	193.29	45.10	3.71	gar	20-Oct-63	n	24-3
	m	10		26-Mar-79	27-Sep-91	652.57	152.27	12.52	gro	14-Apr-30	n	48-12

	m	15		12-Nov-90	27-Sep-91	45.57	10.63	0.87	pay	19-Nov-67	n	22-12
	m	13		6-Nov-84	27-Sep-91	359.43	83.87	6.89	joi	20-Dec-55	n	28-11
	m	10		30-Jul-79	27-Sep-91	634.57	148.07	12.17	pay	2-Feb-47	n	32-6
	m	2		29-Oct-90	27-Sep-91	47.57	11.10	0.91	pay	11-Jul-57	c	33-4
	m	10		13-Mar-78	27-Sep-91	706.57	164.87	13.55	pay	15-Jul-44	n	33-8
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	roo	4-May-73	n	16-4
	m	15		24-Jun-91	27-Sep-91	13.57	3.17	0.26	gro	22-Feb-70	n	21-5
	m	2		25-Feb-91	27-Sep-91	30.57	7.13	0.59	fit	11-Jun-46	c	44-9
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	bri	11-Mar-44	n	31-3
	m	10		11-Nov-85	27-Sep-91	306.57	71.53	5.88	pla	28-Aug-29	n	56-3
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	bri	19-May-73	n	16-3
	m	2		1-Jul-91	27-Sep-91	12.57	2.93	0.24	plu	15-Jul-65	c	25-12
	m	10		11-Dec-89	27-Sep-91	93.57	21.83	1.79	elect	11-Sep-62	c	27-4
	m	15		13-Aug-84	27-Sep-91	371.57	86.70	7.13	elect	15-Aug-67	c	16-12
	m	15		10-Nov-75	27-Sep-91	828.57	193.33	15.89	pla	10-Jan-51	n	24-10
	m	11		13-Sep-89	27-Sep-91	106.29	24.80	2.04	joi	4-Sep-70	n	19-1
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	roo	6-Aug-49	n	25-10
	m	2		18-Feb-91	27-Sep-91	31.57	7.37	0.61	pai	31-Jan-56	c	35-1
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	joi	30-Aug-71	nc	16-12
	f	15		14-Aug-89	27-Sep-91	110.57	25.80	2.12	pai	15-Aug-73	n	15-12
	m	8		5-Aug-80	27-Sep-91	581.43	135.67	11.15	pai	3-Jan-63	n	17-8
	m	15		8-Jul-91	27-Sep-91	11.57	2.70	0.22	joi	15-Mar-64	n	27-4
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	joi	21-May-28	n	55-12
	m	1		4-Mar-91	27-Sep-91	29.57	6.90	0.57	elect	26-Nov-63	c	27-4
	m	15		1-Oct-85	27-Sep-91	312.43	72.90	5.99	pla	7-Oct-59	n	25-12
	m	2		4-Mar-91	27-Sep-91	29.57	6.90	0.57	plu	13-Jul-35	c	55-8
	m	15		6-Sep-82	27-Sep-91	472.57	110.27	9.06	gro	10-May-61	n	21-4
	m	15		9-Sep-83	27-Sep-91	420.00	98.00	8.05	gro	21-Feb-37	n	46-7
	m	6		3-Jun-91	27-Sep-91	16.57	3.87	0.32	bri	12-Feb-59	n	32-4
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	14-Oct-74	n	16-9
	f	10		22-Feb-88	27-Sep-91	187.57	43.77	3.60	clean	30-May-37	n	50-9
	m	8		7-Aug-78	27-Sep-91	685.57	159.97	13.15	pla	25-Mar-62	n	16-5
	m	1		15-Oct-90	27-Sep-91	49.57	11.57	0.95	pai	30-Jul-70	c	20-3
	m	14		7-Nov-83	27-Sep-91	411.57	96.03	7.89	lab	21-Oct-47	n	36-1
	m	8		6-Aug-79	27-Sep-91	633.57	147.83	12.15	pai	4-Mar-63	o	16-6
	m	2		18-Feb-91	27-Sep-91	31.57	7.37	0.61	bri	8-Aug-61	c	29-7
	m	10		5-May-87	27-Sep-91	229.43	53.53	4.40	pai	3-Jun-39	c	47-12

	m	13		2-Mar-87	27-Sep-91	238.57	55.67	4.58	gro	2-Jan-45	n	42-2
	m	15		19-Aug-74	27-Sep-91	892.57	208.27	17.12	elect	26-Jan-58	c	16-7
	m	8		14-Aug-88	27-Sep-91	162.71	37.97	3.12	elect	13-Dec-72	o	15-9
	m	10		9-May-83	27-Sep-91	437.57	102.10	8.39	gro	22-Aug-63	n	19-9
	m	11		2-Jul-90	27-Sep-91	64.57	15.07	1.24	engi	26-Feb-74	h	16-5
	m	13		7-Mar-88	27-Sep-91	185.57	43.30	3.56	cha	9-May-58	n	29-10
	m	13		5-Feb-90	27-Sep-91	85.57	19.97	1.64	pai	15-Nov-48	c	41-3
	m	13		25-Mar-91	27-Sep-91	26.57	6.20	0.51	pai	5-Jan-50	c	41-3
	m	13		2-May-74	27-Sep-91	908.14	211.90	17.42	elect	25-Apr-54	c	20-1
	m	10		11-Aug-86	27-Sep-91	267.57	62.43	5.13	lab	15-Apr-53	n	33-4
	m	8		28-Sep-87	27-Sep-91	208.57	48.67	4.00	joi	28-Sep-71	nc	15-12
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	joi	24-May-71	o	17-3
	m	10		17-Oct-77	27-Sep-91	727.57	169.77	13.95	plu	30-Jun-60	n	17-4
	m	13		1-Sep-75	27-Sep-91	838.57	195.67	16.08	joi	16-Feb-59	c	16-7
	m	10		10-Jun-91	27-Sep-91	15.57	3.63	0.30	gro	25-Apr-72	n	19-2
	m	6		4-Mar-91	27-Sep-91	29.57	6.90	0.57	plu	2-Feb-65	c	26-1
	m	10		10-Aug-79	27-Sep-91	633.00	147.70	12.14	elect	2-Apr-63	c	16-5
	m	7		4-Nov-75	27-Sep-91	829.43	193.53	15.91	cha	19-Dec-37	c	37-11
	m	2		2-Apr-91	27-Sep-91	25.43	5.93	0.49	engi	12-Feb-48	c	43-2
	m	10		18-Sep-67	27-Sep-91	1253.57	292.50	24.04	engi	14-Sep-50	c	17-1
	m	2		4-Feb-91	27-Sep-91	33.57	7.83	0.64	joi	4-Aug-55	c	35-7
	m	10		25-Feb-91	27-Sep-91	30.57	7.13	0.59	engi	14-Dec-56	c	34-3
	m	6		30-Jul-91	27-Sep-91	8.43	1.97	0.16	pla	1-Mar-41	c	50-5
	m	14		1-Nov-85	27-Sep-91	308.00	71.87	5.91	lab	29-Oct-46	n	39-1
	m	15		22-Aug-83	27-Sep-91	422.57	98.60	8.10	joi	21-Mar-66	n	17-6
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	joi	21-Dec-72	h	16-8
	m	11		8-Aug-88	27-Sep-91	163.57	38.17	3.14	pai	16-Mar-72	o	16-5
	m	15		16-May-75	27-Sep-91	854.00	199.27	16.38	pai	1-Aug-41	n	33-10
	m	11		11-Aug-86	27-Sep-91	267.57	62.43	5.13	gar	17-Feb-70	n	16-6
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	roo	11-Jun-67	hn	16-3
	m	10		1-Dec-75	27-Sep-91	825.57	192.63	15.83	gro	21-Jan-57	n	18-11
	m	10		30-Oct-78	27-Sep-91	673.57	157.17	12.92	lab	2-Jul-48	n	30-4
	m	7		26-Jan-81	27-Sep-91	556.57	129.87	10.67	joi	22-Aug-50	c	30-6
	m	2		8-Apr-91	27-Sep-91	24.57	5.73	0.47	pla	25-Feb-60	n	31-2
	m	1		14-Jan-91	27-Sep-91	36.57	8.53	0.70	joi	2-Jan-60	c	31-1
	m	10		31-Jul-78	27-Sep-91	686.57	160.20	13.17	pai	11-Jun-35	n	43-2
	m	10		16-May-75	27-Sep-91	854.00	199.27	16.38	gro	17-Mar-55	n	20-2

	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	pla	17-Oct-44	n	30-7
	m	8		11-Aug-86	27-Sep-91	267.57	62.43	5.13	elect	10-Dec-64	n	21-8
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	engi	18-May-53	c	30-12
	m	10		1-Jul-91	27-Sep-91	12.57	2.93	0.24	pla	14-Dec-73	o	17-7
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	pai	13-Sep-74	o	15-10
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	cha	14-Mar-55	c	29-2
	m	10		3-Dec-90	27-Sep-91	42.57	9.93	0.82	cha	5-Feb-31	nc	59-10
	m	6		7-Jan-91	27-Sep-91	37.57	8.77	0.72	engi	6-Jun-46	c	44-8
	m	10		1-Jul-91	27-Sep-91	12.57	2.93	0.24	gro	27-Apr-50	n	41-3
	m	10		7-Aug-78	27-Sep-91	685.57	159.97	13.15	pai	2-Nov-61	n	16-10
	f	10		1-Jul-91	27-Sep-91	12.57	2.93	0.24	plu	27-Jul-74	s	16-12
	m	10		23-Mar-87	27-Sep-91	235.57	54.97	4.52	pla	27-Dec-63	n	23-3
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	joi	27-Oct-54	n	29-7
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	plu	15-Jun-45	n	38-11
	m	11		5-Aug-80	27-Sep-91	581.43	135.67	11.15	pai	2-Dec-62	o	17-9
	m	8		31-Aug-84	27-Sep-91	369.00	86.10	7.08	roo	31-Aug-68	n	15-12
	m	8		3-Aug-88	27-Sep-91	164.29	38.33	3.15	joi	24-Apr-71	h	17-4
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	gro	21-Nov-71	n	19-8
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	elect	28-Jul-71	h	17-1
	m	7		10-Mar-80	27-Sep-91	602.57	140.60	11.56	gro	7-Jan-47	n	33-3
	m	11		14-Nov-88	27-Sep-91	149.57	34.90	2.87	joi	9-Oct-71	h	17-2
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	joi	14-Aug-39	n	35-10
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	plu	10-Jun-52	n	39-1
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	cha	31-Oct-36	n	38-7
	m	13		3-Nov-75	27-Sep-91	829.57	193.57	15.91	engi	1-Nov-29	n	46-1
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	roo	15-Jun-73	n	16-2
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	plu	12-Dec-55	c	28-5
	m	13		13-Feb-84	27-Sep-91	397.57	92.77	7.62	elect	14-Jan-42	c	42-1
	m	10		5-Mar-80	27-Sep-91	603.29	140.77	11.57	elect	29-Sep-46	c	33-6
	m	10		31-May-82	27-Sep-91	486.57	113.53	9.33	elect	11-Oct-53	c	28-8
	m	6		23-Feb-76	27-Sep-91	813.57	189.83	15.60	joi	25-Aug-53	n	22-6
	m	10		7-Jul-86	27-Sep-91	272.57	63.60	5.23	pla	5-Oct-61	n	24-10
	m	10		16-May-75	27-Sep-91	854.00	199.27	16.38	engi	22-Jan-58	c	17-4
	m	13		17-Oct-70	27-Sep-91	1092.86	255.00	20.96	;ab	10-Mar-32	n	38-8
	m	10		6-Jun-83	27-Sep-91	433.57	101.17	8.32	gro	14-Oct-44	n	38-8
	m	13		4-Aug-69	27-Sep-91	1155.57	269.63	22.16	joi	10-Aug-53	n	15-12
	m	1		5-Nov-90	27-Sep-91	46.57	10.87	0.89	elect	11-Aug-45	c	45-3

	m	15		13-Nov-78	27-Sep-91	671.57	156.70	12.88	gro	22-Aug-45	n	33-3
	m	11		2-Jul-90	27-Sep-91	64.57	15.07	1.24	elect	16-Oct-73	o	16-9
	m	11		2-Jul-90	27-Sep-91	64.57	15.07	1.24	joi	1-Dec-73	o	16-7
	m	15		24-Jun-91	27-Sep-91	13.57	3.17	0.26	gro	24-Mar-67	n	24-4
	m	13		1-Aug-77	27-Sep-91	738.57	172.33	14.16	gro	25-Aug-57	n	19-12
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	roo	11-Feb-54	c	21-4
	m	2		18-Feb-91	27-Sep-91	31.57	7.37	0.61	roo	29-Mar-60	n	30-11
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	plu	9-Dec-72	h	16-9
	m	10		5-May-87	27-Sep-91	229.43	53.53	4.40	pai	12-Feb-49	n	38-3
	m	11		14-Aug-89	27-Sep-91	110.57	25.80	2.12	joi	22-Dec-72	o	16-8
	m	10		8-Apr-74	27-Sep-91	911.57	212.70	17.48	wm	27-May-29	n	44-11
	m	10		3-Aug-87	27-Sep-91	216.57	50.53	4.15	elect	22-Sep-71	o	15-11
	m	1		22-Nov-83	27-Sep-91	409.43	95.53	7.85	pai	6-Feb-38	n	45-10
	m	11		25-Jan-89	27-Sep-91	139.29	32.50	2.67	engi	21-Apr-71	c	17-10
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	engi	25-Feb-43	n	32-3
	m	14		21-May-90	27-Sep-91	70.57	16.47	1.35	gro	15-Mar-69	n	21-3
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	dri	6-Jul-35	n	39-11
	m	7		8-Apr-80	27-Sep-91	598.43	139.63	11.48	gar	10-Feb-63	n	17-2
	m	10		18-Feb-91	27-Sep-91	31.57	7.37	0.61	joi	30-Mar-64	c	26-11
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	pai	1-Apr-73	o	16-5
	m	2		1-Jul-91	27-Sep-91	12.57	2.93	0.24	bri	19-Feb-58	c	33-5
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	plu	10-Jul-43	c	31-11
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	roo	28-Oct-53	c	21-7
	m	10		7-Feb-86	27-Sep-91	294.00	68.60	5.64	joi	12-Dec-42	c	43-2
	m	15		17-Nov-75	27-Sep-91	827.57	193.10	15.87	plu	25-Jun-55	c	20-5
	m	10		4-Jul-90	27-Sep-91	64.29	15.00	1.23	plu	8-Jul-54	c	35-12
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	joi	19-Mar-67	o	16-6
	m	10		25-Jan-82	27-Sep-91	504.57	117.73	9.68	elect	14-Jun-61	c	20-8
	m	10		5-Aug-80	27-Sep-91	581.43	135.67	11.15	pai	14-Dec-63	n	16-8
	m	10		5-Aug-80	27-Sep-91	581.43	135.67	11.15	plu	8-Sep-64	o	15-11
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	elect	16-Mar-40	c	44-2
	m	15		24-Oct-83	27-Sep-91	413.57	96.50	7.93	elect	1-Apr-63	c	20-7
	m	15		16-May-83	27-Sep-91	436.57	101.87	8.37	joi	12-Jun-53	n	29-12
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	gro	15-Jun-74	n	17-1
	m	7		4-Aug-81	27-Sep-91	529.43	123.53	10.15	gro	25-Jun-52	n	29-2
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	gro	13-Jan-42	n	33-5
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	gro	17-Jan-40	n	35-4

	m	10		4-Sep-78	27-Sep-91	681.57	159.03	13.07	lab	6-Apr-55	n	23-5
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	pla	30-Oct-70	n	16-10
	m	8		6-Aug-79	27-Sep-91	633.57	147.83	12.15	pai	5-Jun-62	o	17-3
	m	10		15-Feb-74	27-Sep-91	919.00	214.43	17.62	fit	17-Oct-54	c	19-5
	m	10		3-Aug-87	27-Sep-91	216.57	50.53	4.15	roo	28-Aug-71	o	15-12
	m	10		4-Mar-78	27-Sep-91	707.86	165.17	13.58	pai	6-Nov-53	c	24-4
	m	10		4-Sep-87	27-Sep-91	212.00	49.47	4.07	gro	20-Apr-69	n	18-5
	m	10		12-Nov-90	27-Sep-91	45.57	10.63	0.87	pai	24-May-54	c	36-6
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	pai	13-Mar-75	s	16-4
	m	10		21-Jan-80	27-Sep-91	609.57	142.23	11.69	joi	29-Apr-34	n	45-9
	m	6		21-Jun-82	27-Sep-91	483.57	112.83	9.27	joi	31-Jul-38	n	43-11
	m	10		16-Aug-82	27-Sep-91	475.57	110.97	9.12	gar	16-Aug-65	h	16-12
	m	10		11-Nov-85	27-Sep-91	306.57	71.53	5.88	plu	2-Jun-63	n	22-6
	m	8		9-Sep-86	27-Sep-91	263.43	61.47	5.05	joi	29-May-67	o	19-4
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	joi	6-Oct-44	c	30-8
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	joi	31-May-34	c	40-12
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	gro	29-Sep-46	n	28-8
	m	15		9-May-83	27-Sep-91	437.57	102.10	8.39	joi	19-Aug-40	n	42-9
	m	10		26-Dec-77	27-Sep-91	717.57	167.43	13.76	bri	22-Jan-36	n	41-12
	m	15		19-May-80	27-Sep-91	592.57	138.27	11.36	joi	23-Jan-58	c	22-4
	m	10		10-Apr-78	27-Sep-91	702.57	163.93	13.47	pai	21-Oct-49	c	28-6
	m	10		4-Mar-91	27-Sep-91	29.57	6.90	0.57	joi	20-Aug-46	n	44-7
	m	15		4-Nov-83	27-Sep-91	412.00	96.13	7.90	gro	26-Jul-40	n	43-4
	m	2		25-Feb-91	27-Sep-91	30.57	7.13	0.59	engi	24-Dec-46	c	44-3
	m	11		14-Aug-89	27-Sep-91	110.57	25.80	2.12	pla	18-Apr-73	o	16-4
	m	10		4-Jul-83	27-Sep-91	429.57	100.23	8.24	gro	6-Aug-65	n	17-11
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	joi	9-Oct-57	n	17-8
	m	10		7-Sep-81	27-Sep-91	524.57	122.40	10.06	lab	27-Nov-41	n	39-10
	m	10		14-Apr-82	27-Sep-91	493.29	115.10	9.46	dri	23-Apr-54	n	27-12
	m	10		14-Jan-80	27-Sep-91	610.57	142.47	11.71	lab	22-Jul-61	n	18-6
	m	15		27-Feb-91	27-Sep-91	30.29	7.07	0.58	elect	11-Oct-39	c	51-5
	m	15		9-May-78	27-Sep-91	698.43	162.97	13.39	bri	8-Jun-34	c	43-12
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	joi	31-Aug-44	c	30-9
	m	8		4-Aug-81	27-Sep-91	529.43	123.53	10.15	pai	15-Oct-64	h	16-10
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	gar	4-Mar-43	n	32-3
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	joi	24-Dec-47	c	27-5
	m	10		18-Jul-79	27-Sep-91	636.29	148.47	12.20	gar	15-Jun-46	n	33-2

	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	dri	6-Feb-33	n	42-4
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	plu	18-Jun-39	c	35-11
	m	13		3-Oct-77	27-Sep-91	729.57	170.23	13.99	pai	30-Mar-61	c	16-7
	m	15		9-May-86	27-Sep-91	281.00	65.57	5.39	joi	22-Jun-27	c	58-11
	m	8		5-Aug-85	27-Sep-91	320.57	74.80	6.15	pai	30-Jan-69	o	16-7
	m	14		5-Feb-90	27-Sep-91	85.57	19.97	1.64	joi	1-Jan-62	c	28-2
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	joi	14-Oct-72	h	16-10
	m	15		30-Jan-84	27-Sep-91	399.57	93.23	7.66	elect	12-Dec-27	c	56-2
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	plu	6-Apr-55	c	20-2
	m	10		25-May-83	27-Sep-91	435.29	101.57	8.35	gro	19-Mar-59	n	24-3
	m	15		14-May-79	27-Sep-91	645.57	150.63	12.38	gro	8-Jun-48	n	30-12
	m	13		17-Oct-77	27-Sep-91	727.57	169.77	13.95	mech	17-Jun-56	n	21-5
	m	15		10-Jun-91	27-Sep-91	15.57	3.63	0.30	gro	28-Jun-72	o	18-12
	m	2		15-Oct-90	27-Sep-91	49.57	11.57	0.95	pai	5-Sep-65	c	25-2
	m	10		14-Dec-87	27-Sep-91	197.57	46.10	3.79	lab	23-Jan-57	n	30-11
	m	15		10-Oct-77	27-Sep-91	728.57	170.00	13.97	joi	3-Nov-58	n	18-12
	m	15		12-Aug-74	27-Sep-91	893.57	208.50	17.14	joi	10-May-58	n	16-4
	m	15		25-Feb-91	27-Sep-91	30.57	7.13	0.59	elect	3-Dec-51	n	39-3
	m	1		7-Sep-87	27-Sep-91	211.57	49.37	4.06	engi	20-Aug-50	n	37-1
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	joi	25-Aug-31	n	43-9
	m	8		5-Mar-90	27-Sep-91	81.57	19.03	1.56	joi	3-Mar-73	o	17-1
	m	11		2-Jul-90	27-Sep-91	64.57	15.07	1.24	plu	11-Dec-73	o	16-7
	m	13		24-Jun-75	27-Sep-91	848.43	197.97	16.27	joi	2-Jun-34	c	41-1
	m	13		16-Jun-75	27-Sep-91	849.57	198.23	16.29	pai	4-Jul-41	c	33-12
	m	10		16-Aug-86	27-Sep-91	266.86	62.27	5.12	engi	1-Sep-65	h	20-12
	m	13		16-Jan-75	27-Sep-91	871.14	203.27	16.71	pai	5-Sep-30	c	44-5
	m	14		20-Jun-83	27-Sep-91	431.57	100.70	8.28	sto	3-Mar-51	n	32-4
	m	10		10-May-82	27-Sep-91	489.57	114.23	9.39	elect	8-Jul-54	c	27-11
	m	10		12-Jun-78	27-Sep-91	693.57	161.83	13.30	pai	3-Jan-48	n	30-6
	m	15		6-Jul-74	27-Sep-91	898.86	209.73	17.24	pai	26-May-58	n	16-2
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	lab	13-Sep-54	n	20-9
	m	10		12-Jun-78	27-Sep-91	693.57	161.83	13.30	pai	5-Apr-40	n	38-3
	m	2		1-Jul-91	27-Sep-91	12.57	2.93	0.24	pla	19-Sep-55	n	35-10
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	plu	30-Sep-72	o	15-11
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	pai	11-Dec-38	c	36-6
	m	10		29-May-90	27-Sep-91	69.43	16.20	1.33	lab	18-Aug-70	n	19-10
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	pai	9-Feb-49	c	26-4

	m	15		9-Sep-82	27-Sep-91	472.14	110.17	9.05	joi	19-Feb-58	n	24-7
	m	15		7-Aug-72	27-Sep-91	998.57	233.00	19.15	elect	19-Apr-56	n	16-4
	m	15		15-Aug-66	27-Sep-91	1310.57	305.80	25.13	dri	10-Oct-40	n	25-11
	m	8		13-Aug-84	27-Sep-91	371.57	86.70	7.13	elect	22-Feb-68	o	16-6
	m	15		26-Jan-70	27-Sep-91	1130.57	263.80	21.68	dri	10-Oct-40	n	29-4
	m	15		5-Sep-81	27-Sep-91	524.86	122.47	10.07	joi	5-Sep-65	n	15-12
	m	10		14-Jan-91	27-Sep-91	36.57	8.53	0.70	pai	11-Apr-60	n	30-10
	m	14		7-Oct-87	27-Sep-91	207.29	48.37	3.98	gro	5-Aug-61	n	26-3
	m	10		21-Jun-78	27-Sep-91	692.29	161.53	13.28	pai	11-Mar-53	n	25-4
	m	2		11-Jun-90	27-Sep-91	67.57	15.77	1.30	engi	25-May-38	n	52-1
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	pai	10-May-72	o	16-3
	m	13		5-Feb-90	27-Sep-91	85.57	19.97	1.64	dri	25-Apr-38	n	51-10
	m	13		26-May-75	27-Sep-91	852.57	198.93	16.35	lab	18-Apr-52	n	23-2
	m	13		25-Sep-79	27-Sep-91	626.43	146.17	12.01	gro	23-Sep-51	n	28-1
	m	7		31-Oct-88	27-Sep-91	151.57	35.37	2.91	sto	27-May-67	n	21-6
	m	10		9-Aug-76	27-Sep-91	789.57	184.23	15.14	lab	20-Jan-39	n	37-7
	m	15		7-Aug-78	27-Sep-91	685.57	159.97	13.15	pai	11-Jan-62	n	16-7
	m	10		10-Jan-83	27-Sep-91	454.57	106.07	8.72	lab	27-Dec-36	n	46-1
	m	8		13-Aug-84	27-Sep-91	371.57	86.70	7.13	joi	1-Mar-68	o	16-6
	m	10		6-Sep-88	27-Sep-91	159.43	37.20	3.06	sto	9-Jan-64	n	24-8
	m	13		15-May-75	27-Sep-91	854.14	199.30	16.38	pai	22-Jun-46	n	28-11
	m	14		10-Oct-83	27-Sep-91	415.57	96.97	7.97	elect	26-May-46	c	37-5
	m	8		11-Aug-86	27-Sep-91	267.57	62.43	5.13	wm	19-Apr-70	o	16-4
	m	8		14-Aug-88	27-Sep-91	162.71	37.97	3.12	pai	10-Mar-73	o	15-6
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	joi	23-May-33	c	41-12
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	engi	25-Dec-71	h	16-8
	m	15		3-Jun-91	27-Sep-91	16.57	3.87	0.32	joi	13-Oct-68	c	22-8
	m	10		13-Mar-78	27-Sep-91	706.57	164.87	13.55	joi	1-Jun-55	n	22-10
	m	10		2-Aug-76	27-Sep-91	790.57	184.47	15.16	joi	4-Jun-60	o	16-2
	m	15		8-Jul-91	27-Sep-91	11.57	2.70	0.22	gro	19-Aug-71	n	19-11
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	gro	7-Sep-71	n	19-10
	m	1		8-Jul-91	27-Sep-91	11.57	2.70	0.22	roo	3-Jan-64	n	27-7
	m	13		14-May-75	27-Sep-91	854.29	199.33	16.38	lab	22-Jan-42	n	33-4
	m	15		3-Jul-91	27-Sep-91	12.29	2.87	0.24	gro	24-Dec-71	n	19-7
	m	10		21-May-90	27-Sep-91	70.57	16.47	1.35	gro	18-Oct-66	n	23-8
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	plu	20-Apr-71	o	16-4
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	roo	29-Jun-36	n	38-11

	m	15		11-May-81	27-Sep-91	541.57	126.37	10.39	gro	7-Jan-65	n	16-5
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	elect	11-Aug-55	c	19-10
	m	10		12-Jun-78	27-Sep-91	693.57	161.83	13.30	pai	16-Oct-50	n	27-8
	m	14		20-Feb-84	27-Sep-91	396.57	92.53	7.61	joi	27-Jul-60	c	23-7
	m	11		10-Sep-90	27-Sep-91	54.57	12.73	1.05	elect	24-Apr-72	o	18-5
	m	15		8-Aug-88	27-Sep-91	163.57	38.17	3.14	joi	5-Oct-71	o	16-11
	m	10		1-Jul-91	27-Sep-91	12.57	2.93	0.24	pla	1-Apr-75	s	16-3
	m	13		25-Mar-91	27-Sep-91	26.57	6.20	0.51	engi	27-Apr-46	n	44-11
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	elect	9-Feb-71	h	16-6
	m	15		23-Feb-87	27-Sep-91	239.57	55.90	4.59	gro	6-Feb-33	n	54-1
	m	10		6-Aug-79	27-Sep-91	633.57	147.83	12.15	mech	16-Aug-62	o	16-12
	m	10		4-Feb-80	27-Sep-91	607.57	141.77	11.65	pai	31-Jul-58	c	21-7
	m	10		14-May-90	27-Sep-91	71.57	16.70	1.37	joi	27-Apr-59	c	31-1
	m	2		15-Oct-90	27-Sep-91	49.57	11.57	0.95	pai	11-Apr-64	h	26-7
	m	10		9-Jul-82	27-Sep-91	481.00	112.23	9.22	elect	15-Feb-65	h	17-5
	m	10		8-Aug-88	27-Sep-91	163.57	38.17	3.14	plu	9-Sep-71	h	16-11
	m	15		9-May-78	27-Sep-91	698.43	162.97	13.39	gro	16-Sep-31	n	46-8
	m	2		14-Jan-91	27-Sep-91	36.57	8.53	0.70	pai	14-Apr-63	n	27-10
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	joi	14-Feb-71	n	04-3
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	joi	29-Nov-73	h	16-8
	m	2		18-Feb-91	27-Sep-91	31.57	7.37	0.61	plu	6-Nov-64	c	26-4
	m	10		21-Apr-80	27-Sep-91	596.57	139.20	11.44	gro	23-Jan-43	n	37-3
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	plu	27-Oct-73	h	17-9
	m	14		31-May-88	27-Sep-91	173.43	40.47	3.33	joi	11-Feb-64	c	24-4
	m	15		16-May-88	27-Sep-91	175.57	40.97	3.37	lab	18-May-63	n	24-12
	m	15		12-Aug-74	27-Sep-91	893.57	208.50	17.14	pai	24-Jan-58	n	16-7
	m	8		7-Aug-78	27-Sep-91	685.57	159.97	13.15	plu	9-Dec-61	o	16-8
	m	13		2-Aug-71	27-Sep-91	1051.57	245.37	20.17	pla	24-Apr-54	n	17-4
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	elect	18-Jun-71	o	16-2
	m	1		15-Oct-90	27-Sep-91	49.57	11.57	0.95	pai	20-Mar-55	n	35-7
	m	15		13-May-91	27-Sep-91	19.57	4.57	0.38	roo	17-Jul-64	c	26-10
	m	15		4-Dec-78	27-Sep-91	668.57	156.00	12.82	fit	2-May-60	n	18-8
	m	15		16-Aug-82	27-Sep-91	475.57	110.97	9.12	elect	1-Aug-65	h	17-1
	m	14		24-Nov-86	27-Sep-91	252.57	58.93	4.84	sto	9-Jun-33	n	53-6
	m	11		14-Aug-89	27-Sep-91	110.57	25.80	2.12	joi	22-Mar-72	h	17-5
	m	13		2-Jul-79	27-Sep-91	638.57	149.00	12.25	plu	13-Nov-61	n	17-8
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	joi	1-Sep-70	h	16-12

	m	2		22-Oct-90	27-Sep-91	48.57	11.33	0.93	pai	5-Mar-68	c	22-8
	m	8		5-Aug-85	27-Sep-91	320.57	74.80	6.15	joi	9-Mar-69	o	16-5
	m	2		7-May-91	27-Sep-91	20.43	4.77	0.39	joi	14-Nov-65	c	25-6
	m	13		18-Jan-65	27-Sep-91	1392.57	324.93	26.71	pla	23-Dec-35	n	29-1
	m	1		17-Apr-90	27-Sep-91	75.43	17.60	1.45	elect	2-Oct-65	n	24-7
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	joi	24-Oct-71	h	16-10
	m	11		8-Aug-88	27-Sep-91	163.57	38.17	3.14	plu	14-Mar-71	h	17-5
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	plu	7-May-74	o	17-2
	m	15		3-Aug-87	27-Sep-91	216.57	50.53	4.15	joi	10-Feb-71	h	16-6
	m	15		16-Apr-75	27-Sep-91	858.29	200.27	16.46	joi	12-Jul-38	c	36-10
	m	13		19-Apr-82	27-Sep-91	492.57	114.93	9.45	gro	5-Jan-58	n	24-4
	m	14		3-Mar-86	27-Sep-91	290.57	67.80	5.57	plu	24-Sep-40	c	45-6
	m	13		19-May-86	27-Sep-91	279.57	65.23	5.36	lab	31-Aug-67	n	18-9
	m	13		24-Aug-70	27-Sep-91	1100.57	256.80	21.11	wm	26-Jan-45	n	25-7
	m	15		27-Nov-86	27-Sep-91	252.14	58.83	4.84	elect	19-Mar-65	h	21-9
	m	14		27-Jan-84	27-Sep-91	400.00	93.33	7.67	gro	20-Jun-57	n	26-8
	m	1		28-Jul-91	27-Sep-91	8.71	2.03	0.17	joi	21-Dec-55	c	35-8
	m	6		5-Jan-87	27-Sep-91	246.57	57.53	4.73	gro	10-Mar-58	n	28-10
	m	2		22-Oct-90	27-Sep-91	48.57	11.33	0.93	pai	27-Jun-65	o	25-4
	m	15		7-May-84	27-Sep-91	385.57	89.97	7.39	engi	27-Sep-62	n	21-8
	m	15		4-Jun-90	27-Sep-91	68.57	16.00	1.32	lab	17-Apr-63	n	27-2
	m	15		22-Aug-83	27-Sep-91	422.57	98.60	8.10	engi	1-Dec-66	o	16-9
	m	15		6-Mar-78	27-Sep-91	707.57	165.10	13.57	engi	14-Aug-50	n	27-7
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	cha	11-Nov-36	c	38-7
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	lab	16-Jul-37	n	46-10
	m	13		31-Jul-67	27-Sep-91	1260.57	294.13	24.18	pai	9-May-51	n	16-3
	m	15		1-Nov-82	27-Sep-91	464.57	108.40	8.91	gro	12-Nov-50	n	31-12
	m	15		19-Jun-78	27-Sep-91	692.57	161.60	13.28	pai	29-Jun-35	c	42-12
	m	15		14-Jan-85	27-Sep-91	349.57	81.57	6.70	gro	29-Aug-61	n	23-5
	m	8		13-Aug-84	27-Sep-91	371.57	86.70	7.13	pla	29-Jan-68	n	16-7
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	elect	23-Dec-73	h	17-7
	m	1		7-Nov-83	27-Sep-91	411.57	96.03	7.89	roo	11-Jan-69	n	14-10
	m	13		1-Nov-76	27-Sep-91	777.57	181.43	14.91	lab	16-Jul-57	n	19-4
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	elect	22-Apr-73	h	17-3
	m	15		25-Feb-85	27-Sep-91	343.57	80.17	6.59	gro	29-Oct-64	n	20-4
	m	15		18-Oct-83	27-Sep-91	414.43	96.70	7.95	lab	26-Jun-46	n	37-4
	m	15		13-Aug-84	27-Sep-91	371.57	86.70	7.13	elect	13-Dec-67	o	16-8

	m	13		1-Sep-75	27-Sep-91	838.57	195.67	16.08	joi	17-Aug-59	n		16-1
	m	13		22-Nov-71	27-Sep-91	1035.57	241.63	19.86	elect	4-Jan-50	n		21-11
	m	15		15-Jan-90	27-Sep-91	88.57	20.67	1.70	plu	11-Jun-62	n		27-8
	m	15		7-May-84	27-Sep-91	385.57	89.97	7.39	elect	4-Jun-62	c		21-12
	m	15		17-May-82	27-Sep-91	488.57	114.00	9.37	gro	24-Mar-59	n		23-2
	m	13		8-Nov-71	27-Sep-91	1037.57	242.10	19.90	elect	12-Dec-55	n		15-11
	m	15		14-Aug-78	27-Sep-91	684.57	159.73	13.13	joi	10-May-62	n		16-4
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	plu	17-Jun-74	s		17-1
	m	15		1-Nov-82	27-Sep-91	464.57	108.40	8.91	gro	19-Jan-39	n		43-10
	m	13		2-Mar-86	27-Sep-91	290.71	67.83	5.58	gro	30-Mar-67	n		18-12
	m	13		12-Mar-79	27-Sep-91	654.57	152.73	12.55	gro	3-Mar-56	n		23-1
	m	15		11-Aug-86	27-Sep-91	267.57	62.43	5.13	joi	12-Apr-70	n		16-4
	m	13		7-Aug-72	27-Sep-91	998.57	233.00	19.15	bri	25-Mar-56	c		16-5
	m	15		14-Aug-89	27-Sep-91	110.57	25.80	2.12	joi	15-Feb-73	h		16-6
	m	15		21-May-90	27-Sep-91	70.57	16.47	1.35	gro	12-Aug-65	n		24-10
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	bri	19-Apr-74	o		16-3
	m	15		2-Jul-90	27-Sep-91	64.57	15.07	1.24	pai	15-Apr-73	h		17-3
	m	15		13-Aug-84	27-Sep-91	371.57	86.70	7.13	joi	20-Aug-67	h		16-12
	m	15		12-Sep-83	27-Sep-91	419.57	97.90	8.05	joi	8-Sep-31	c		52-1
	m	15		28-Sep-81	27-Sep-91	521.57	121.70	10.00	pai	25-Apr-41	c		40-6
	m	8		7-Aug-78	27-Sep-91	685.57	159.97	13.15	pai	28-Feb-62	o		16-6
	m	15		29-Aug-77	27-Sep-91	734.57	171.40	14.09	joi	22-Dec-60	c		16-9
	m	10		25-Sep-90	27-Sep-91	52.43	12.23	1.01	pai	16-Apr-64	c		26-6
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	elect	21-May-74	o		17-2
	m	15		31-Aug-83	27-Sep-91	421.29	98.30	8.08	pai	16-Aug-64	n		19-1
	m	15		12-Jun-78	27-Sep-91	693.57	161.83	13.30	pai	2-Sep-45	n		32-10
	m	15		6-Aug-79	27-Sep-91	633.57	147.83	12.15	pai	2-Apr-63	n		16-5
	m	13		1-Sep-75	27-Sep-91	838.57	195.67	16.08	elect	7-Jan-59	n		16-8
	m	15		26-Aug-85	27-Sep-91	317.57	74.10	6.09	gro	25-Mar-46	n		39-6
	m	15		8-Jul-91	27-Sep-91	11.57	2.70	0.22	gro	22-Jun-71	n		20-1
	m	11		2-Jul-90	27-Sep-91	64.57	15.07	1.24	elect	12-Apr-74	o		16-3
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	engi	25-Sep-73	h		17-10
	m	8		13-Aug-84	27-Sep-91	371.57	86.70	7.13	engi	20-Oct-67	h		16-10
	m	8		3-Jan-91	27-Sep-91	38.14	8.90	0.73	pla	13-Mar-73	o		17-10
	m	2		22-Oct-90	27-Sep-91	48.57	11.33	0.93	pai	1-Oct-64	o		26-1
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	joi	18-Sep-72	n		15-11
	m	13		15-Feb-60	27-Sep-91	1649.57	384.90	31.64	joi	21-Nov-29	c		30-3

	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	joi	6-Oct-71	o	16-11
	m	15		5-Aug-88	27-Sep-91	164.00	38.27	3.15	joi	30-Oct-62	o	25-10
	m	13		6-Oct-75	27-Sep-91	833.57	194.50	15.99	gro	21-Nov-55	n	19-11
	m	15		30-May-83	27-Sep-91	434.57	101.40	8.33	lab	28-Dec-61	n	21-6
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	plu	25-Sep-75	n	15-10
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	7-Aug-75	n	15-11
	m	13		12-Jun-78	27-Sep-91	693.57	161.83	13.30	pai	1-Oct-51	c	26-9
	m	15		1-Mar-82	27-Sep-91	499.57	116.57	9.58	elect	22-Nov-37	n	44-4
	m	14		26-May-86	27-Sep-91	278.57	65.00	5.34	wm	23-Dec-60	o	25-6
	m	14		19-Jan-86	27-Sep-91	296.71	69.23	5.69	store	11-May-62	c	23-9
	m	13		10-Apr-67	27-Sep-91	1276.57	297.87	24.48	elect	16-Jun-50	n	16-10
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	elect	18-Feb-66	h	17-7
	m	8		27-Feb-84	27-Sep-91	395.57	92.30	7.59	pla	8-Aug-67	o	16-7
	m	6		26-Nov-90	27-Sep-91	43.57	10.17	0.84	lab	24-Jun-35	n	55-6
	m	13		6-Jan-65	27-Sep-91	1394.29	325.33	26.74	elect	31-Oct-48	c	16-3
	m	15		13-Aug-84	27-Sep-91	371.57	86.70	7.13	joi	22-Mar-68	n	16-5
	m	15		5-May-87	27-Sep-91	229.43	53.53	4.40	bri	5-Feb-27	c	60-3
	m	13		7-Aug-72	27-Sep-91	998.57	233.00	19.15	plu	7-Sep-55	c	16-11
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	pla	30-Mar-71	o	16-5
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	joi	14-Apr-74	o	16-3
	m	15		11-Aug-86	27-Sep-91	267.57	62.43	5.13	roo	18-Jun-70	o	16-2
	m	2		22-Oct-90	27-Sep-91	48.57	11.33	0.93	pai	13-Nov-66	c	23-12
	m	15		14-May-79	27-Sep-91	645.57	150.63	12.38	pai	11-May-45	n	34-1
	m	15		3-Aug-87	27-Sep-91	216.57	50.53	4.15	bri	18-Feb-71	n	16-6
	m	8		11-Aug-86	27-Sep-91	267.57	62.43	5.13	pla	15-Apr-70	o	16-4
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	22-May-75	o	16-2
	m	15		12-Dec-88	27-Sep-91	145.57	33.97	2.79	elect	17-Oct-67	o	21-2
	m	13		27-Oct-69	27-Sep-91	1143.57	266.83	21.93	pai	11-Jan-49	c	20-10
	m	13		30-Jul-79	27-Sep-91	634.57	148.07	12.17	pai	13-Nov-48	c	30-9
	m	13		29-Mar-71	27-Sep-91	1069.57	249.57	20.51	lab	8-Oct-48	n	22-6
	m	11		14-Aug-89	27-Sep-91	110.57	25.80	2.12	joi	13-Jun-73	o	16-3
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	pai	21-Feb-67	o	16-6
	m	15		2-Apr-90	27-Sep-91	77.57	18.10	1.49	plu	14-Sep-71	h	18-7
	m	13		18-Feb-91	27-Sep-91	31.57	7.37	0.61	joi	25-Jul-40	c	50-7
	m	13		11-Sep-78	27-Sep-91	680.57	158.80	13.05	lab	4-Jul-58	n	20-3
	m	11		11-Aug-86	27-Sep-91	267.57	62.43	5.13	elect	21-Apr-70	o	16-4
	m	2		22-Oct-90	27-Sep-91	48.57	11.33	0.93	pai	13-Jun-41	o	49-5

	m	15		25-Mar-91	27-Sep-91	26.57	6.20	0.51	pai	28-Mar-46	n	44-12
	m	13		3-Apr-78	27-Sep-91	703.57	164.17	13.49	gro	27-Mar-56	n	22-1
	m	13		9-Sep-74	27-Sep-91	889.57	207.57	17.06	pai	30-Dec-49	c	24-9
	m	2		18-Feb-91	27-Sep-91	31.57	7.37	0.61	plu	18-Jul-64	c	26-8
	m	15		30-Aug-91	27-Sep-91	4.00	0.93	0.08	joi	11-Mar-57	c	34-6
	m	15		16-Aug-82	27-Sep-91	475.57	110.97	9.12	elect	20-Dec-65	h	16-8
	m	2		14-Jan-91	27-Sep-91	36.57	8.53	0.70	pla	27-Oct-61	c	29-3
	m	15		1-Aug-78	27-Sep-91	686.43	160.17	13.16	lab	17-Feb-42	n	36-6
	m	7		22-Jul-91	27-Sep-91	9.57	2.23	0.18	cha	13-Jul-32	c	59-1
	m	14		5-Aug-85	27-Sep-91	320.57	74.80	6.15	joi	8-Apr-63	c	22-4
	m	11		14-Aug-89	27-Sep-91	110.57	25.80	2.12	joi	19-May-73	n	16-3
	m	2		5-Mar-90	27-Sep-91	81.57	19.03	1.56	bri	9-Dec-54	c	35-3
	m	13		1-Mar-71	27-Sep-91	1073.57	250.50	20.59	plu	21-Jul-44	n	26-8
	m	13		7-Aug-78	27-Sep-91	685.57	159.97	13.15	lab	27-Jul-58	n	20-1
	m	6		7-Feb-83	27-Sep-91	450.57	105.13	8.64	scaf	30-Mar-61	n	21-11
	m	13		11-Mar-59	27-Sep-91	1698.29	396.27	32.57	dri	15-Feb-36	n	23-1
	m	6		3-Dec-90	27-Sep-91	42.57	9.93	0.82	gro	23-May-62	n	28-7
	m	15		6-Feb-78	27-Sep-91	711.57	166.03	13.65	plu	11-Aug-55	c	22-6
	m	1		3-Dec-90	27-Sep-91	42.57	9.93	0.82	engi	2-Mar-60	c	30-10
	m	15		5-Jun-80	27-Sep-91	590.14	137.70	11.32	lab	4-Mar-36	n	44-4
	m	15		19-Aug-91	27-Sep-91	5.57	1.30	0.11	pai	6-Jun-75	o	16-3
	m	15		14-Sep-87	27-Sep-91	210.57	49.13	4.04	gro	20-Jan-61	n	26-8
	m	13		29-Mar-71	27-Sep-91	1069.57	249.57	20.51	roo	12-Feb-46	n	25-2
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	plu	10-Apr-67	o	16-5
	m	2		11-Feb-91	27-Sep-91	32.57	7.60	0.62	pai	2-Sep-53	n	37-6
	m	11		14-Aug-89	27-Sep-91	110.57	25.80	2.12	engi	2-Oct-72	o	16-11
	m	13		5-Oct-70	27-Sep-91	1094.57	255.40	20.99	joi	17-Dec-46	c	23-10
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	bri	4-Mar-71	o	16-5
	m	10		1-Sep-75	27-Sep-91	838.57	195.67	16.08	pla	13-Jan-59	n	16-8
	m	15		8-Aug-88	27-Sep-91	163.57	38.17	3.14	joi	26-Jan-71	o	17-7
	m	1		11-Mar-91	27-Sep-91	28.57	6.67	0.55	elect	14-Feb-67	c	24-1
	m	8		11-Aug-86	27-Sep-91	267.57	62.43	5.13	joi	27-Jul-70	o	16-1
	m	13		31-Jul-67	27-Sep-91	1260.57	294.13	24.18	joi	12-Jul-51	c	16-1
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	5-Jan-75	h	16-6
	m	7		16-May-83	27-Sep-91	436.57	101.87	8.37	gro	10-Nov-56	n	26-7
	m	15		17-Apr-78	27-Sep-91	701.57	163.70	13.45	pai	19-Oct-58	n	19-6
	m	10		25-Feb-80	27-Sep-91	604.57	141.07	11.59	gro	22-Apr-60	n	19-11

	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	30-Oct-73	o	17-8
	m	15		3-Apr-78	27-Sep-91	703.57	164.17	13.49	pai	28-Mar-50	c	28-1
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	elect	14-Aug-70	h	16-12
	m	15		25-Feb-80	27-Sep-91	604.57	141.07	11.59	engi	27-Jun-47	c	32-8
	m	15		29-Jul-91	27-Sep-91	8.57	2.00	0.16	roo	19-Mar-64	c	27-5
	m	2		4-Mar-91	27-Sep-91	29.57	6.90	0.57	pla	21-Sep-62	c	28-6
	m	15		25-Feb-80	27-Sep-91	604.57	141.07	11.59	pai	18-Jan-47	c	33-2
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	3-Dec-74	nc	16-7
	m	13		16-Feb-70	27-Sep-91	1127.57	263.10	21.62	pai	20-Mar-45	c	24-11
	m	13		28-Feb-72	27-Sep-91	1021.57	238.37	19.59	engi	18-Feb-52	c	20-1
	m	13		11-Sep-74	27-Sep-91	889.29	207.50	17.05	gro	27-Jun-44	n	30-3
	m	2		14-Jan-91	27-Sep-91	36.57	8.53	0.70	joi	6-Sep-53	c	37-5
	m	7		5-May-87	27-Sep-91	229.43	53.53	4.40	elect	22-Nov-35	c	51-6
	m	15		16-Aug-80	27-Sep-91	579.86	135.30	11.12	elect	21-Jan-65	h	15-7
	m	2		16-Jul-91	27-Sep-91	10.43	2.43	0.20	bri	23-Jan-47	c	44-6
	m	15		16-Jul-91	27-Sep-91	10.43	2.43	0.20	bri	12-Mar-71	c	20-5
	m	2		15-Oct-90	27-Sep-91	49.57	11.57	0.95	pai	13-Dec-63	c	26-11
	m	13		12-Aug-74	27-Sep-91	893.57	208.50	17.14	joi	22-Dec-57	c	16-8
	m	15		18-Sep-78	27-Sep-91	679.57	158.57	13.03	lab	9-Sep-30	n	48-1
	m	15		19-Sep-77	27-Sep-91	731.57	170.70	14.03	lab	10-Jul-54	n	23-3
	m	15		7-Jan-86	27-Sep-91	298.43	69.63	5.72	gro	27-May-62	n	23-8
	m	15		16-May-75	27-Sep-91	854.00	199.27	16.38	pai	21-Nov-50	n	24-6
	m	15		17-Dec-79	27-Sep-91	614.57	143.40	11.79	lab	31-Jan-63	n	16-11
	m	15		1-Jul-85	27-Sep-91	325.57	75.97	6.24	gro	11-Oct-66	n	18-9
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	joi	24-Sep-70	h	16-11
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	plu	31-Mar-74	n	17-4
	m	15		6-Feb-89	27-Sep-91	137.57	32.10	2.64	joi	25-Mar-59	c	29-11
	m	14		25-Mar-91	27-Sep-91	26.57	6.20	0.51	joi	9-Dec-33	c	57-4
	m	15		18-Nov-81	27-Sep-91	514.29	120.00	9.86	sto	10-Oct-46	n	35-2
	m	13		12-Jun-72	27-Sep-91	1006.57	234.87	19.30	pai	28-Jan-35	c	37-5
	m	13		22-Aug-66	27-Sep-91	1309.57	305.57	25.12	gro	21-Dec-45	n	20-8
	m	15		5-Aug-85	27-Sep-91	320.57	74.80	6.15	elect	3-Mar-68	o	17-6
	m	8		2-Sep-90	27-Sep-91	55.71	13.00	1.07	pai	26-Mar-73	o	17-6
	m	15		20-Feb-78	27-Sep-91	709.57	165.57	13.61	pai	24-Dec-45	c	32-2
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	plu	25-Jan-67	h	16-7
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	22-Nov-67	n	23-8
	m	13		21-Jan-74	27-Sep-91	922.57	215.27	17.69	gro	14-Nov-48	n	25-3

	m	15		7-May-84	27-Sep-91	385.57	89.97	7.39	joi	13-Apr-43	c	41-1
	m	15		23-Feb-76	27-Sep-91	813.57	189.83	15.60	lab	28-Jun-57	n	18-8
	m	15		27-Aug-90	27-Sep-91	56.57	13.20	1.08	gro	21-Aug-71	n	19-1
	m	2		11-Feb-91	27-Sep-91	32.57	7.60	0.62	pai	16-Jan-65	c	26-1
	m	15		11-Aug-80	27-Sep-91	580.57	135.47	11.13	joi	22-Jul-63	o	17-1
	m	15		1-Oct-90	27-Sep-91	51.57	12.03	0.99	pai	15-Mar-31	c	59-7
	m	13		27-Oct-75	27-Sep-91	830.57	193.80	15.93	pai	26-Jun-47	c	28-5
	m	15		6-Feb-78	27-Sep-91	711.57	166.03	13.65	plu	26-Oct-53	c	24-4
	m	8		6-Aug-79	27-Sep-91	633.57	147.83	12.15	joi	10-Mar-63	o	16-5
	m	2		25-Feb-91	27-Sep-91	30.57	7.13	0.59	elect	5-Mar-51	c	39-12
	m	15		5-Aug-85	27-Sep-91	320.57	74.80	6.15	joi	16-Mar-69	o	16-5
	m	13		13-May-74	27-Sep-91	906.57	211.53	17.39	joi	17-May-51	c	22-12
	m	15		31-Jan-83	27-Sep-91	451.57	105.37	8.66	scaf	8-Nov-33	n	49-3
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	lab	26-Feb-57	n	27-3
	m	14		11-Jul-91	27-Sep-91	11.14	2.60	0.21	bri	1-May-46	n	45-3
	m	13		4-Aug-69	27-Sep-91	1155.57	269.63	22.16	joi	9-Aug-53	c	15-12
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	joi	28-Jan-72	h	17-7
	m	14		3-May-88	27-Sep-91	177.43	41.40	3.40	dri	23-Sep-55	n	32-8
	m	2		18-Feb-91	27-Sep-91	31.57	7.37	0.61	elect	21-Jul-43	c	47-7
	m	15		8-Jan-79	27-Sep-91	663.57	154.83	12.73	joi	9-Mar-41	c	37-10
	m	2		29-Oct-90	27-Sep-91	47.57	11.10	0.91	pai	9-Sep-56	c	34-2
	m	15		10-Sep-90	27-Sep-91	54.57	12.73	1.05	scaf	11-Sep-59	o	30-12
	m	15		3-Dec-90	27-Sep-91	42.57	9.93	0.82	gro	10-Jun-66	n	24-6
	m	14		10-Feb-86	27-Sep-91	293.57	68.50	5.63	elect	12-Nov-55	c	30-3
	m	13		20-May-74	27-Sep-91	905.57	211.30	17.37	lab	4-Mar-51	n	23-3
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	elect	6-Aug-60	n	14-10
	m	15		16-Aug-82	27-Sep-91	475.57	110.97	9.12	elect	15-May-65	h	17-4
	m	15		20-Feb-78	27-Sep-91	709.57	165.57	13.61	pai	31-Mar-46	c	31-11
	m	13		22-Nov-71	27-Sep-91	1035.57	241.63	19.86	plu	15-Feb-29	c	42-10
	m	15		13-Aug-84	27-Sep-91	371.57	86.70	7.13	elect	15-May-67	h	17-3
	m	13		4-Jun-69	27-Sep-91	1164.29	271.67	22.33	gro	11-Jun-30	n	38-12
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	16-Aug-74	o	16-11
	m	15		13-Aug-84	27-Sep-91	371.57	86.70	7.13	gro	28-May-32	n	52-3
	m	2		3-Dec-90	27-Sep-91	42.57	9.93	0.82	joi	24-Nov-53	c	37-1
	m	8		11-Mar-85	27-Sep-91	341.57	79.70	6.55	pai	5-Oct-67	h	17-6
	m	2		4-Feb-91	27-Sep-91	33.57	7.83	0.64	joi	8-Mar-51	c	39-11
	m	15		24-Aug-87	27-Sep-91	213.57	49.83	4.10	engi	21-Nov-66	o	20-10

	m	2		18-Jun-90	27-Sep-91	66.57	15.53	1.28	tech	6-Nov-51	n	38-8
	m	7		21-Jan-91	27-Sep-91	35.57	8.30	0.68	lab	2-Sep-64	n	26-5
	m	15		20-May-91	27-Sep-91	18.57	4.33	0.36	joi	1-May-60	c	31-1
	m	2		15-Oct-90	27-Sep-91	49.57	11.57	0.95	pai	23-Jun-62	n	28-4
	m	13		22-May-78	27-Sep-91	696.57	162.53	13.36	lab	14-Sep-56	n	21-9
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	pla	3-Jun-67	o	16-3
	m	2		4-Mar-91	27-Sep-91	29.57	6.90	0.57	elect	29-Jun-53	c	37-9
	m	13		11-Aug-69	27-Sep-91	1154.57	269.40	22.14	lab	27-Sep-29	n	39-11
	m	13		30-Oct-67	27-Sep-91	1247.57	291.10	23.93	lab	3-Feb-43	n	24-9
	m	13		6-Jun-66	27-Sep-91	1320.57	308.13	25.33	plu	18-Feb-43	c	23-4
	m	2		11-Mar-91	27-Sep-91	28.57	6.67	0.55	engi	5-Jun-56	c	34-10
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	roo	17-Oct-74	s	16-9
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	bri	11-Apr-75	o	16-3
	m	6		16-Jun-86	27-Sep-91	275.57	64.30	5.28	gro	13-Sep-62	o	23-10
	m	13		25-May-67	27-Sep-91	1270.14	296.37	24.36	elect	11-Aug-50	c	16-10
	m	15		8-Oct-79	27-Sep-91	624.57	145.73	11.98	pai	16-Mar-54	c	25-7
	m	8		6-Aug-79	27-Sep-91	633.57	147.83	12.15	elect	29-Sep-62	h	16-11
	m	15		25-Feb-91	27-Sep-91	30.57	7.13	0.59	plu	3-Jul-40	c	50-8
	m	15		25-May-83	27-Sep-91	435.29	101.57	8.35	lab	28-Apr-43	n	40-1
	m	15		20-Aug-79	27-Sep-91	631.57	147.37	12.11	plu	4-Nov-52	n	26-10
	m	14		19-Mar-84	27-Sep-91	392.57	91.60	7.53	joi	23-Jan-48	c	36-2
	m	6		20-Feb-78	27-Sep-91	709.57	165.57	13.61	pai	10-Jul-46	c	31-8
	m	8		5-Aug-80	27-Sep-91	581.43	135.67	11.15	pai	17-Dec-63	o	16-8
	m	15		26-Aug-85	27-Sep-91	317.57	74.10	6.09	gro	23-Dec-63	n	21-9
	m	15		24-Oct-77	27-Sep-91	726.57	169.53	13.93	lab	3-Sep-58	n	19-2
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	pai	31-Jan-33	c	42-4
	m	8		11-Aug-86	27-Sep-91	267.57	62.43	5.13	pla	4-Apr-70	o	16-5
	m	15		21-Jun-82	27-Sep-91	483.57	112.83	9.27	roo	9-Aug-52	n	29-11
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	plu	1-Sep-74	h	16-10
	m	14		17-Oct-77	27-Sep-91	727.57	169.77	13.95	pai	14-Oct-60	n	17-1
	m	13		6-Mar-78	27-Sep-91	707.57	165.10	13.57	pla	12-Nov-35	c	42-4
	m	13		13-Jan-69	27-Sep-91	1184.57	276.40	22.72	engi	11-May-53	c	15-9
	m	15		13-Mar-78	27-Sep-91	706.57	164.87	13.55	plu	7-Mar-57	c	21-1
	m	13		17-Aug-70	27-Sep-91	1101.57	257.03	21.13	joi	10-Jun-39	n	31-3
	m	15		29-Jun-82	27-Sep-91	482.43	112.57	9.25	engi	7-May-30	n	52-2
	m	2		14-Jan-91	27-Sep-91	36.57	8.53	0.70	joi	22-May-39	c	51-8
	m	13		5-Sep-54	27-Sep-91	1933.71	451.20	37.08	joi	20-Jun-29	n	25-3

	m	15		13-Nov-78	27-Sep-91	671.57	156.70	12.88	gro	5-May-59	n	19-7
	m	15		17-Nov-75	27-Sep-91	827.57	193.10	15.87	joi	8-Feb-48	n	27-10
	m	13		6-Aug-73	27-Sep-91	946.57	220.87	18.15	elect	30-Apr-56	c	17-4
	m	1		30-Mar-90	27-Sep-91	78.00	18.20	1.50	elect	22-Sep-58	o	31-7
	m	11		7-Aug-90	27-Sep-91	59.43	13.87	1.14	bri	7-Aug-74	n	15-12
	m	15		5-Mar-84	27-Sep-91	394.57	92.07	7.57	gro	25-Nov-65	n	18-4
	m	14		21-Mar-88	27-Sep-91	183.57	42.83	3.52	sto	27-Sep-41	n	46-6
	m	1		14-Jan-91	27-Sep-91	36.57	8.53	0.70	pla	23-Jan-71	c	19-12
	m	13		3-Dec-73	27-Sep-91	929.57	216.90	17.83	wm	15-Mar-39	c	34-9
	m	1		29-Oct-90	27-Sep-91	47.57	11.10	0.91	pai	2-Sep-48	c	42-2
	m	15		6-Aug-79	27-Sep-91	633.57	147.83	12.15	engi	7-Feb-62	h	17-6
	m	15		5-Aug-91	27-Sep-91	7.57	1.77	0.15	bri	16-Feb-43	c	48-6
	m	14		10-Apr-78	27-Sep-91	702.57	163.93	13.47	plu	20-Jun-49	c	28-10
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	elect	29-Jan-75	h	16-6
	m	13		7-Aug-72	27-Sep-91	998.57	233.00	19.15	joi	12-May-56	n	16-3
	m	15		20-Aug-79	27-Sep-91	631.57	147.37	12.11	gro	5-Apr-48	n	31-5
	m	10		5-Aug-91	27-Sep-91	7.57	1.77	0.15	roo	10-Mar-67	n	24-5
	m	15		13-Oct-75	27-Sep-91	832.57	194.27	15.97	gro	14-Dec-40	n	34-10
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	plu	18-Feb-75	o	16-5
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	plu	17-Jun-70	o	17-2
	m	15		27-Feb-84	27-Sep-91	395.57	92.30	7.59	bri	20-Dec-40	n	43-3
	m	15		11-Feb-91	27-Sep-91	32.57	7.60	0.62	engi	8-Aug-55	n	35-7
	m	15		21-Nov-83	27-Sep-91	409.57	95.57	7.85	gro	24-Sep-55	n	28-2
	m	1		20-Aug-90	27-Sep-91	57.57	13.43	1.10	joi	21-Sep-68	c	21-11
	m	15		8-Aug-88	27-Sep-91	163.57	38.17	3.14	elect	4-Oct-71	o	16-11
	m	15		13-Jul-81	27-Sep-91	532.57	124.27	10.21	gro	6-Aug-54	n	26-12
	m	8		5-Aug-80	27-Sep-91	581.43	135.67	11.15	pla	27-Mar-63	h	17-5
	m	15		14-Dec-81	27-Sep-91	510.57	119.13	9.79	elect	1-Sep-44	c	37-4
	m	2		4-Mar-91	27-Sep-91	29.57	6.90	0.57	pla	5-Sep-59	c	31-6
	m	6		4-Dec-85	27-Sep-91	303.29	70.77	5.82	lab	23-Dec-62	n	22-12
	m	7		26-Sep-78	27-Sep-91	678.43	158.30	13.01	lab	8-Sep-37	n	41-1
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	elect	28-Jun-72	o	16-2
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	plu	4-Jul-72	o	16-2
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	7-Aug-75	o	15-11
	m	15		18-Jul-91	27-Sep-91	10.14	2.37	0.19	joi	15-Dec-52	c	38-8
	m	15		16-Aug-82	27-Sep-91	475.57	110.97	9.12	joi	31-Jul-65	o	17-1
	m	13		17-Feb-72	27-Sep-91	1023.14	238.73	19.62	lab	31-Jul-42	n	29-7

	m	15		29-Jun-76	27-Sep-91	795.43	185.60	15.25	bri	5-Jan-44	n	32-6
	m	13		18-Oct-64	27-Sep-91	1405.71	328.00	26.96	pai	22-Feb-42	c	22-8
	m	13		12-Nov-56	27-Sep-91	1819.57	424.57	34.90	plu	31-Jul-42	c	14-4
	m	15		22-May-78	27-Sep-91	696.57	162.53	13.36	gro	10-Oct-33	n	44-8
	m	1		20-Oct-90	27-Sep-91	48.86	11.40	0.94	pai	19-Jul-46	c	44-4
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	pai	15-Oct-66	h	16-11
	m	15		22-Aug-83	27-Sep-91	422.57	98.60	8.10	pai	26-Mar-66	o	17-5
	m	15		28-May-91	27-Sep-91	17.43	4.07	0.33	joi	25-Aug-67	o	23-10
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	pai	18-Nov-66	o	16-10
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	roo	20-Aug-75	s	15-11
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	elect	28-Jul-74	h	16-12
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	12-Sep-74	h	16-10
	m	8		11-Aug-86	27-Sep-91	267.57	62.43	5.13	joi	2-Jan-70	h	16-8
	m	15		10-Mar-80	27-Sep-91	602.57	140.60	11.56	elect	28-Apr-49	n	30-11
	m	13		13-Jun-66	27-Sep-91	1319.57	307.90	25.31	elect	3-Dec-38	c	27-7
	m	2		11-Mar-91	27-Sep-91	28.57	6.67	0.55	joi	6-Mar-51	c	40-1
	m	15		18-Mar-85	27-Sep-91	340.57	79.47	6.53	gro	4-Oct-66	n	18-6
	m	13		7-Oct-74	27-Sep-91	885.57	206.63	16.98	gro	10-Aug-40	n	34-2
	m	11		14-Aug-89	27-Sep-91	110.57	25.80	2.12	pla	10-Apr-73	o	16-5
	m	13		11-Sep-61	27-Sep-91	1567.57	365.77	30.06	pai	12-May-46	c	15-5
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	pai	18-Dec-73	h	16-7
	m	8		11-Aug-86	27-Sep-91	267.57	62.43	5.13	elect	29-Nov-69	h	16-9
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	24-Mar-74	h	17-4
	m	15		16-Aug-82	27-Sep-91	475.57	110.97	9.12	joi	13-Dec-65	h	16-9
	m	1		10-Aug-87	27-Sep-91	215.57	50.30	4.13	lab	11-Oct-30	n	56-10
	m	14		30-Jul-91	27-Sep-91	8.43	1.97	0.16	bri	4-Apr-58	c	33-4
	m	13		6-Oct-75	27-Sep-91	833.57	194.50	15.99	lab	13-Nov-58	n	16-11
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	joi	23-Nov-73	o	16-8
	m	13		26-Feb-73	27-Sep-91	969.57	226.23	18.59	elect	9-May-43	c	29-10
	m	13		21-Nov-83	27-Sep-91	409.57	95.57	7.85	gro	6-Apr-54	n	29-8
	m	14		1-Sep-86	27-Sep-91	264.57	61.73	5.07	admin	7-May-30	n	56-4
	m	8		27-May-90	27-Sep-91	69.71	16.27	1.34	plu	1-Jul-73	h	16-11
	m	15		13-Mar-75	27-Sep-91	863.14	201.40	16.55	lab	9-Jun-60	n	14-10
	m	15		27-Oct-86	27-Sep-91	256.57	59.87	4.92	gro	28-Oct-37	n	48-12
	m	13		7-Aug-72	27-Sep-91	998.57	233.00	19.15	joi	4-May-56	c	16-4
	m	13		20-Dec-71	27-Sep-91	1031.57	240.70	19.78	lab	29-May-39	n	32-7
	m	8		13-Aug-84	27-Sep-91	371.57	86.70	7.13	pai	22-May-68	o	16-3

	m	13		5-Aug-74	27-Sep-91	894.57	208.73	17.16	joi	2-May-30	c	44-4
	m	8		11-Aug-86	27-Sep-91	267.57	62.43	5.13	roo	8-Mar-70	o	16-6
	m	15		14-Aug-89	27-Sep-91	110.57	25.80	2.12	plu	22-Aug-72	o	16-12
	m	15		4-Aug-81	27-Sep-91	529.43	123.53	10.15	pai	10-Jul-64	h	17-1
	m	6		12-May-80	27-Sep-91	593.57	138.50	11.38	gro	17-Oct-48	n	31-7
	m	15		23-Jun-80	27-Sep-91	587.57	137.10	11.27	plu	18-Mar-59	c	21-4
	m	2		14-Jan-91	27-Sep-91	36.57	8.53	0.70	pla	28-Jan-64	c	26-12
	m	2		7-Jan-91	27-Sep-91	37.57	8.77	0.72	engi	24-Apr-47	n	43-9
	m	15		18-Nov-91	24-Mar-92	18.14	4.23	0.35	joi	20-Sep-48	c	43-2
	m	15		27-Feb-82	27-Sep-91	499.86	116.63	9.59	gro	25-Feb-62	n	20-1
	m	15		31-Jul-78	27-Sep-91	686.57	160.20	13.17	pai	18-May-40	c	38-3
	m	14		26-Mar-84	27-Sep-91	391.57	91.37	7.51	joi	29-Jan-42	c	42-2
	m	15		10-May-75	27-Sep-91	854.86	199.47	16.39	joi	5-Apr-59	c	16-2
	m	13		12-Mar-74	27-Sep-91	915.43	213.60	17.56	joi	28-Feb-31	c	43-1
	m	15		29-Aug-77	27-Sep-91	734.57	171.40	14.09	plu	15-Mar-61	o	16-6
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	engi	14-Aug-74	o	16-11
	m	15		15-Mar-82	27-Sep-91	497.57	116.10	9.54	gro	12-Mar-64	n	18-1
	m	15		17-Jun-91	27-Sep-91	14.57	3.40	0.28	joi	19-Jan-38	c	53-5
	m	15		7-Sep-81	27-Sep-91	524.57	122.40	10.06	joi	25-Jan-35	c	46-8
	m	15		16-Feb-87	27-Sep-91	240.57	56.13	4.61	gro	26-Apr-30	n	56-10
	m	15		30-Jun-75	27-Sep-91	847.57	197.77	16.25	elect	1-Nov-52	c	22-8
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	pai	2-Dec-71	h	16-9
	m	15		1-May-78	27-Sep-91	699.57	163.23	13.42	gro	19-Jan-39	n	39-4
	m	13		1-Jul-74	27-Sep-91	899.57	209.90	17.25	dri	17-Feb-44	n	30-5
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	pai	23-Jun-67	o	16-2
	m	2		22-Oct-90	27-Sep-91	48.57	11.33	0.93	pai	29-Oct-62	c	27-12
	m	13		22-Feb-71	27-Sep-91	1074.57	250.73	20.61	gro	14-Apr-40	n	30-11
	m	2		25-Feb-91	27-Sep-91	30.57	7.13	0.59	plu	30-Sep-59	c	31-5
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	25-Oct-73	h	17-9
	m	15		16-May-75	27-Sep-91	854.00	199.27	16.38	dri	12-May-28	n	47-1
	m	15		12-Jan-76	27-Sep-91	819.57	191.23	15.72	lab	14-Jul-57	n	18-6
	m	15		6-Oct-78	27-Sep-91	677.00	157.97	12.98	bri	11-Mar-37	c	41-7
	m	15		12-Nov-90	27-Sep-91	45.57	10.63	0.87	pai	20-Nov-51	c	38-12
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	elect	14-Sep-72	o	15-11
	m	15		26-Jan-76	27-Sep-91	817.57	190.77	15.68	pai	15-Mar-46	c	29-11
	m	10		1-Jul-91	27-Sep-91	12.57	2.93	0.24	bri	20-Mar-75	o	16-4
	m	15		17-Apr-78	27-Sep-91	701.57	163.70	13.45	joi	21-Feb-45	c	33-2

	m	15		16-Jul-85	27-Sep-91	323.43	75.47	6.20	plu	12-Jul-54	c	31-1
	m	7		3-Apr-79	27-Sep-91	651.43	152.00	12.49	pai	3-Mar-52	c	27-1
	m	15		12-Mar-84	27-Sep-91	393.57	91.83	7.55	gro	18-Mar-56	n	27-12
	m	15		20-Mar-78	27-Sep-91	705.57	164.63	13.53	lab	17-Oct-58	n	19-6
	m	15		24-Mar-80	27-Sep-91	600.57	140.13	11.52	elect	14-Nov-45	c	34-5
	m	15		1-May-78	27-Sep-91	699.57	163.23	13.42	gro	26-Feb-43	n	35-3
	m	13		1-Apr-91	27-Sep-91	25.57	5.97	0.49	pai	1-Dec-46	c	44-4
	m	8		13-Aug-84	27-Sep-91	371.57	86.70	7.13	pai	17-May-68	o	16-3
	m	13		4-Feb-74	27-Sep-91	920.57	214.80	17.65	sto	15-Jan-48	n	26-1
	m	15		16-May-75	27-Sep-91	854.00	199.27	16.38	pai	27-Apr-44	c	31-1
	m	13		12-Feb-68	27-Sep-91	1232.57	287.60	23.64	plu	12-Dec-36	c	31-3
	m	1		15-Oct-90	27-Sep-91	49.57	11.57	0.95	pai	3-Oct-44	c	46-1
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	elect	30-Jul-71	o	16-1
	m	15		18-Mar-91	27-Sep-91	27.57	6.43	0.53	elect	28-Nov-36	c	54-4
	m	7		4-Aug-86	27-Sep-91	268.57	62.67	5.15	gro	17-Aug-65	n	20-12
	m	15		24-Oct-77	27-Sep-91	726.57	169.53	13.93	joi	7-Apr-28	c	49-7
	m	15		6-Feb-78	27-Sep-91	711.57	166.03	13.65	pai	30-Jan-55	c	23-1
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	mech	18-Aug-67	o	16-1
	m	15		18-Feb-91	27-Sep-91	31.57	7.37	0.61	bri	12-Oct-52	c	38-5
	m	15		13-Oct-75	27-Sep-91	832.57	194.27	15.97	elect	14-Jan-42	c	33-9
	m	13		9-Nov-71	27-Sep-91	1037.43	242.07	19.90	plu	16-Nov-33	c	37-12
	m	13		7-Aug-72	27-Sep-91	998.57	233.00	19.15	pai	10-Apr-56	c	16-4
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	roo	9-Mar-67	o	16-6
	m	14		10-Nov-86	27-Sep-91	254.57	59.40	4.88	gro	31-Jul-64	n	22-4
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	bri	22-Dec-72	c	16-8
	m	15		5-Aug-80	27-Sep-91	581.43	135.67	11.15	pai	1-Aug-64	o	16-1
	m	15		28-Jan-91	27-Sep-91	34.57	8.07	0.66	plu	24-Jul-60	c	30-7
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	pai	28-Jan-74	h	16-6
	m	14		30-Jun-86	27-Sep-91	273.57	63.83	5.25	joi	7-Dec-51	c	34-7
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	elect	3-Dec-71	h	16-9
	m	14		10-Apr-87	27-Sep-91	233.00	54.37	4.47	joi	4-Dec-51	c	35-5
	m	15		22-Aug-83	27-Sep-91	422.57	98.60	8.10	plu	13-Sep-67	o	15-12
	m	15		20-May-82	27-Sep-91	488.14	113.90	9.36	elect	13-Oct-61	o	20-8
	m	15		25-May-81	27-Sep-91	539.57	125.90	10.35	joi	18-Oct-59	c	21-8
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	joi	5-Apr-74	o	16-3
	m	15		31-Mar-80	27-Sep-91	599.57	139.90	11.50	elect	19-Apr-31	c	48-12
	m	15		5-Aug-85	27-Sep-91	320.57	74.80	6.15	engi	23-Dec-68	h	16-8

	m	8		13-Aug-84	27-Sep-91	371.57	86.70	7.13	joi	21-Oct-67	h	16-10
	m	15		26-Feb-85	27-Sep-91	343.43	80.13	6.59	lab	20-Apr-63	n	21-11
	m	15		2-Jul-90	27-Sep-91	64.57	15.07	1.24	joi	16-Feb-74	o	16-5
	m	8		11-Aug-86	27-Sep-91	267.57	62.43	5.13	pla	19-Dec-69	h	16-8
	m	13		22-Nov-71	27-Sep-91	1035.57	241.63	19.86	elect	27-May-44	c	27-6
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	elect	16-Aug-72	o	15-12
	m	15		4-Jun-80	27-Sep-91	590.29	137.73	11.32	elect	16-Feb-63	o	17-4
	m	15		1-Aug-77	27-Sep-91	738.57	172.33	14.16	plu	24-Apr-61	c	16-4
	m	14		5-Aug-91	27-Sep-91	7.57	1.77	0.15	pla	15-Mar-62	c	29-5
	m	15		22-Jul-91	27-Sep-91	9.57	2.23	0.18	pla	22-Jan-58	c	33-6
	m	2		17-Jun-91	27-Sep-91	14.57	3.40	0.28	engi	5-Sep-37	c	53-10
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	elect	15-Jun-71	o	17-2
	m	15		10-Sep-79	27-Sep-91	628.57	146.67	12.05	joi	15-May-57	c	22-4
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	joi	27-Jul-72	o	16-1
	m	13		1-Jun-74	27-Sep-91	903.86	210.90	17.33	joi	15-Aug-36	c	37-10
	m	13		14-Jan-54	27-Sep-91	1967.14	459.00	37.73	wm	5-Feb-35	c	18-12
	m	15		6-Sep-82	27-Sep-91	472.57	110.27	9.06	lab	10-May-65	n	17-4
	m	13		20-Aug-84	27-Sep-91	370.57	86.47	7.11	gro	15-Dec-63	n	20-9
	m	15		18-Aug-80	27-Sep-91	579.57	135.23	11.12	elect	7-Jul-63	o	17-2
	m	13		7-May-84	27-Sep-91	385.57	89.97	7.39	elect	23-Feb-50	c	34-3
	m	6		15-Oct-90	27-Sep-91	49.57	11.57	0.95	pai	31-Dec-52	c	37-10
	m	8		5-Aug-85	27-Sep-91	320.57	74.80	6.15	plu	24-Feb-69	o	16-6
	m	8		14-Aug-85	27-Sep-91	319.29	74.50	6.12	bri	14-Aug-69	o	15-12
	m	15		18-Apr-88	27-Sep-91	179.57	41.90	3.44	lab	10-Jan-42	n	46-4
	m	15		7-May-84	27-Sep-91	385.57	89.97	7.39	elect	16-Feb-62	o	22-3
	m	15		12-Jan-76	27-Sep-91	819.57	191.23	15.72	pai	14-May-45	c	30-8
	m	8		30-Aug-87	27-Sep-91	212.71	49.63	4.08	elect	12-Nov-70	h	16-10
	m	15		2-Jul-90	27-Sep-91	64.57	15.07	1.24	joi	17-Jan-74	o	16-6
	m	13		10-Feb-70	27-Sep-91	1128.43	263.30	21.64	joi	27-Aug-49	c	20-6
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	joi	10-Sep-74	o	15-10
	f	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	joi	24-Apr-72	o	16-4
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	plu	16-Nov-72	h	17-8
	m	15		4-Aug-81	27-Sep-91	529.43	123.53	10.15	pai	12-May-64	h	17-3
	m	15		16-Aug-83	27-Sep-91	423.43	98.80	8.12	joi	4-Aug-66	o	17-1
	m	15		13-May-84	27-Sep-91	384.71	89.77	7.38	roo	13-Jun-59	c	24-11
	m	15		12-Sep-83	27-Sep-91	419.57	97.90	8.05	lab	25-Sep-43	n	39-12
	m	13		19-Mar-62	27-Sep-91	1540.57	359.47	29.55	bri	10-Dec-41	c	20-4

	m	8		10-May-83	27-Sep-91	437.43	102.07	8.39	engi	12-Apr-66	o	17-1
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	bri	17-Feb-75	s	16-5
	m	2		15-Apr-91	27-Sep-91	23.57	5.50	0.45	engi	16-May-65	o	25-11
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	joi	4-Jul-72	o	16-2
	m	15		13-Aug-84	27-Sep-91	371.57	86.70	7.13	elect	7-Jun-67	h	17-3
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	elect	8-May-71	h	17-4
	m	15		2-Dec-85	27-Sep-91	303.57	70.83	5.82	elect	28-Oct-47	c	38-2
	m	13		7-Aug-72	27-Sep-91	998.57	233.00	19.15	pai	30-Jul-56	c	16-1
	m	15		23-Aug-82	27-Sep-91	474.57	110.73	9.10	elect	10-Dec-65	h	16-9
	m	14		10-Oct-83	27-Sep-91	415.57	96.97	7.97	elect	18-Apr-40	c	43-6
	m	15		26-Apr-76	27-Sep-91	804.57	187.73	15.43	engi	4-Jun-48	c	27-11
	m	15		15-Feb-82	27-Sep-91	501.57	117.03	9.62	joi	12-Feb-37	c	45-1
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	21-Mar-75	o	16-4
	m	15		15-Oct-90	27-Sep-91	49.57	11.57	0.95	pai	27-May-40	c	50-5
	m	8		5-Aug-80	27-Sep-91	581.43	135.67	11.15	joi	4-Apr-64	o	16-5
	m	14		2-Oct-89	27-Sep-91	103.57	24.17	1.99	elect	20-Jun-59	c	30-4
	m	15		25-Mar-80	27-Sep-91	600.43	140.10	11.52	joi	9-Nov-57	c	22-5
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	elect	13-Aug-73	h	17-11
	m	6		5-Jun-90	27-Sep-91	68.43	15.97	1.31	bri	5-Oct-44	c	45-8
	m	2		11-Feb-91	27-Sep-91	32.57	7.60	0.62	engi	24-May-48	c	42-9
	m	14		20-Nov-89	27-Sep-91	96.57	22.53	1.85	elect	18-Mar-51	c	38-9
	m	15		21-Nov-83	27-Sep-91	409.57	95.57	7.85	plu	28-Sep-38	c	45-2
	m	15		12-Apr-76	27-Sep-91	806.57	188.20	15.47	bri	22-Sep-40	c	35-7
	m	10		11-Mar-91	27-Sep-91	28.57	6.67	0.55	roo	17-Aug-67	c	23-7
	m	13		1-Dec-70	27-Sep-91	1086.43	253.50	20.84	elect	4-Nov-46	c	24-1
	m	15		3-Sep-79	27-Sep-91	629.57	146.90	12.07	elect	29-Apr-59	c	20-5
	m	15		18-Feb-91	27-Sep-91	31.57	7.37	0.61	engi	9-Jan-39	c	52-2
	m	15		3-Apr-78	27-Sep-91	703.57	164.17	13.49	pai	10-Jan-57	c	21-3
	m	14		4-Mar-85	27-Sep-91	342.57	79.93	6.57	joi	14-Dec-54	c	30-3
	m	2		27-Aug-84	27-Sep-91	369.57	86.23	7.09	joi	30-Aug-28	c	55-12
	m	13		20-Oct-86	27-Sep-91	257.57	60.10	4.94	elect	17-Jun-58	c	28-5
	m	15		30-Mar-87	27-Sep-91	234.57	54.73	4.50	gro	26-Apr-37	n	49-12
	m	2		18-Mar-91	27-Sep-91	27.57	6.43	0.53	elect	17-Jun-55	c	35-10
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	elect	20-Jul-73	h	16-12
	m	8		4-Aug-81	27-Sep-91	529.43	123.53	10.15	elect	30-Dec-64	h	16-8
	m	15		14-Jan-85	27-Sep-91	349.57	81.57	6.70	plu	9-Nov-66	c	18-3
	m	15		14-Mar-83	27-Sep-91	445.57	103.97	8.55	lab	26-Mar-53	n	29-12

	m	15		7-Aug-78	27-Sep-91	685.57	159.97	13.15	elect	16-Sep-60	h	17-11
	m	2		4-Sep-91	27-Sep-91	3.29	0.77	0.06	joi	25-Jan-64	c	27-8
	m	15		4-Nov-85	27-Sep-91	307.57	71.77	5.90	joi	15-Jul-38	c	47-4
	m	15		1-Jun-87	27-Sep-91	225.57	52.63	4.33	gro	18-Oct-62	n	24-8
	m	13		3-Jul-63	27-Sep-91	1473.29	343.77	28.25	pai	30-May-48	c	15-2
	m	15		12-Jun-78	27-Sep-91	693.57	161.83	13.30	pai	12-Apr-49	c	29-3
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	elect	4-Feb-74	h	17-5
	m	2		18-Feb-91	27-Sep-91	31.57	7.37	0.61	elect	14-Jan-55	c	36-2
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	roo	9-Jul-74	o	15-12
	m	13		30-Jan-89	27-Sep-91	138.57	32.33	2.66	joi	18-Jul-68	c	20-7
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	pla	8-Jan-75	c	16-6
	m	15		13-May-91	27-Sep-91	19.57	4.57	0.38	roo	23-Apr-56	c	35-1
	m	2		8-May-90	27-Sep-91	72.43	16.90	1.39	elect	30-Mar-49	c	41-2
	m	8		13-Aug-84	27-Sep-91	371.57	86.70	7.13	roo	14-Jun-68	o	16-2
	m	15		16-Feb-76	27-Sep-91	814.57	190.07	15.62	elect	16-Feb-33	c	42-12
	m	13		18-Oct-65	27-Sep-91	1353.57	315.83	25.96	pai	22-Jul-41	c	24-3
	m	15		2-Jul-90	27-Sep-91	64.57	15.07	1.24	plu	10-Oct-73	o	16-9
	m	15		7-Aug-78	27-Sep-91	685.57	159.97	13.15	pai	29-Nov-61	o	16-9
	m	15		7-Aug-78	27-Sep-91	685.57	159.97	13.15	elect	10-Nov-60	h	17-9
	m	15		7-Jan-90	27-Sep-91	89.71	20.93	1.72	engi	9-Oct-43	c	46-3
	m	8		14-Aug-84	27-Sep-91	371.43	86.67	7.12	joi	14-Aug-68	o	15-12
	m	15		11-Aug-86	27-Sep-91	267.57	62.43	5.13	joi	7-Jul-70	o	16-2
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	joi	13-Sep-74	o	15-10
	m	15		22-Aug-83	27-Sep-91	422.57	98.60	8.10	elect	3-Sep-66	o	16-12
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	elect	20-May-72	o	16-3
	m	15		4-Aug-81	27-Sep-91	529.43	123.53	10.15	pai	3-Oct-63	o	17-11
	m	15		22-Aug-83	27-Sep-91	422.57	98.60	8.10	pai	3-Feb-67	h	16-7
	m	15		9-May-83	27-Sep-91	437.57	102.10	8.39	gro	30-Mar-62	n	21-2
	m	15		10-Apr-78	27-Sep-91	702.57	163.93	13.47	pai	13-Aug-56	c	21-8
	m	15		23-Feb-87	27-Sep-91	239.57	55.90	4.59	gro	21-Mar-55	n	31-12
	m	13		4-Apr-72	27-Sep-91	1016.43	237.17	19.49	pai	5-May-41	c	30-11
	m	13		4-Jun-66	27-Sep-91	1320.86	308.20	25.33	lab	25-Dec-35	n	30-6
	m	13		24-Apr-72	27-Sep-91	1013.57	236.50	19.44	gro	23-Jan-51	n	21-4
	m	2		8-Jul-91	27-Sep-91	11.57	2.70	0.22	bri	6-Feb-42	c	49-5
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	plu	9-May-74	o	16-2
	m	2		9-Jul-90	27-Sep-91	63.57	14.83	1.22	elect	2-Nov-41	c	48-9
	m	8		7-Aug-78	27-Sep-91	685.57	159.97	13.15	elect	17-Jan-62	o	16-7

	m	15		17-Mar-83	27-Sep-91	445.14	103.87	8.54	lab	16-Dec-62	h	20-3
	m	15		19-Dec-77	27-Sep-91	718.57	167.67	13.78	lab	29-Nov-33	n	44-1
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	joi	17-Jun-72	o	17-2
	m	2		19-Nov-90	27-Sep-91	44.57	10.40	0.85	sto	12-Jun-63	n	27-6
	m	15		13-Feb-84	27-Sep-91	397.57	92.77	7.62	elect	12-Apr-38	c	45-11
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	pla	3-Mar-67	o	16-6
	m	2		25-Feb-91	27-Sep-91	30.57	7.13	0.59	plu	3-Sep-65	c	25-6
	m	2		1-Jul-91	27-Sep-91	12.57	2.93	0.24	pla	10-May-63	c	28-2
	m	15		6-Aug-79	27-Sep-91	633.57	147.83	12.15	plu	11-Aug-62	n	16-12
	m	15		22-Aug-83	27-Sep-91	422.57	98.60	8.10	joi	4-May-66	h	17-4
	m	15		12-Mar-79	27-Sep-91	654.57	152.73	12.55	gro	6-Oct-57	n	21-6
	m	15		30-Jan-84	27-Sep-91	399.57	93.23	7.66	elect	17-May-43	c	40-9
	m	15		2-Feb-87	27-Sep-91	242.57	56.60	4.65	cha	8-Oct-34	n	52-4
	m	13		9-Feb-59	27-Sep-91	1702.57	397.27	32.65	joi	30-Aug-29	c	29-6
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	plu	4-Jun-74	o	16-1
	m	13		2-Nov-64	27-Sep-91	1403.57	327.50	26.92	wm	23-Feb-34	c	30-9
	m	13		6-Aug-73	27-Sep-91	946.57	220.87	18.15	plu	17-May-57	n	16-3
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	bri	5-Aug-71	o	17-1
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	joi	18-Jun-73	o	17-1
	m	2		19-Aug-91	27-Sep-91	5.57	1.30	0.11	joi	22-Aug-53	c	37-12
	m	13		8-Apr-68	27-Sep-91	1224.57	285.73	23.48	roo	1-Sep-39	c	28-8
	m	2		4-Mar-91	27-Sep-91	29.57	6.90	0.57	joi	15-Jun-67	c	23-9
	m	13		7-Aug-72	27-Sep-91	998.57	233.00	19.15	plu	26-May-56	c	16-3
	m	13		24-Apr-72	27-Sep-91	1013.57	236.50	19.44	joi	31-Mar-47	c	25-1
	m	15		20-Feb-84	27-Sep-91	396.57	92.53	7.61	gro	6-May-64	n	19-10
	m	15		6-Jan-76	27-Sep-91	820.43	191.43	15.73	elect	15-Oct-54	c	21-3
	m	15		13-Aug-84	27-Sep-91	371.57	86.70	7.13	pla	6-May-67	h	17-4
	m	14		18-Feb-91	27-Sep-91	31.57	7.37	0.61	roo	18-Jan-64	c	27-1
	m	15		12-Jan-82	27-Sep-91	506.43	118.17	9.71	joi	5-Apr-60	c	21-10
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	joi	31-Jan-72	h	16-7
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	elect	10-Feb-74	o	16-5
	m	13		1-Nov-75	27-Sep-91	829.86	193.63	15.92	joi	7-Feb-44	c	31-9
	m	2		15-Oct-90	27-Sep-91	49.57	11.57	0.95	pai	6-Apr-65	c	25-7
	m	13		16-May-75	27-Sep-91	854.00	199.27	16.38	pai	3-Jan-30	c	45-5
	m	13		27-Nov-72	27-Sep-91	982.57	229.27	18.84	gro	26-Apr-51	n	21-8
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	pai	18-Jun-74	o	17-1
	m	14		31-May-88	27-Sep-91	173.43	40.47	3.33	joi	7-Jan-62	c	26-5

	m	15		11-Jun-90	27-Sep-91	67.57	15.77	1.30	gro	25-Aug-70	n	19-10
	m	15		7-Aug-78	27-Sep-91	685.57	159.97	13.15	pai	20-Nov-52	c	25-9
	m	8		6-Aug-79	27-Sep-91	633.57	147.83	12.15	pla	11-Aug-63	o	15-12
	m	8		7-Aug-78	27-Sep-91	685.57	159.97	13.15	elect	10-Jan-62	o	16-7
	m	10		10-Sep-79	27-Sep-91	628.57	146.67	12.05	gro	17-Jan-30	n	49-8
	m	2		25-Feb-91	27-Sep-91	30.57	7.13	0.59	plu	6-Jul-36	c	54-8
	m	10		18-Feb-80	27-Sep-91	605.57	141.30	11.61	lab	14-Jun-52	n	27-9
	f	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	pai	5-Jan-75	h	16-6
	m	2		11-Mar-91	27-Sep-91	28.57	6.67	0.55	elect	18-May-51	c	39-10
	m	13		22-Jun-59	27-Sep-91	1683.57	392.83	32.29	pai	3-Feb-43	c	16-5
	m	13		22-Jul-91	27-Sep-91	9.57	2.23	0.18	cha	3-Oct-47	c	43-10
	m	15		5-Jun-78	27-Sep-91	694.57	162.07	13.32	pla	25-Mar-35	c	43-3
	m	15		5-Aug-80	27-Sep-91	581.43	135.67	11.15	pai	21-Jun-64	o	16-2
	m	15		2-Jul-90	27-Sep-91	64.57	15.07	1.24	elect	30-Jun-73	o	17-1
	m	13		16-Jun-73	27-Sep-91	953.86	222.57	18.29	elect	13-Feb-37	c	36-5
	m	15		4-Aug-81	27-Sep-91	529.43	123.53	10.15	joi	29-May-64	h	17-3
	m	14		3-Jun-91	27-Sep-91	16.57	3.87	0.32	joi	19-Sep-63	c	27-9
	m	13		3-Aug-70	27-Sep-91	1103.57	257.50	21.16	elect	14-May-54	c	16-3
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	pla	13-Apr-75	o	16-3
	m	15		29-Aug-77	27-Sep-91	734.57	171.40	14.09	joi	9-Apr-60	o	17-5
	m	10		9-Nov-81	27-Sep-91	515.57	120.30	9.89	dri	25-Sep-50	hgv	31-2
	m	10		2-May-77	27-Sep-91	751.57	175.37	14.41	lab	11-Dec-39	n	37-5
	m	15		22-Jun-82	27-Sep-91	483.43	112.80	9.27	joi	21-Mar-44	c	38-4
	m	13		10-Feb-69	27-Sep-91	1180.57	275.47	22.64	pai	11-Aug-41	c	27-7
	m	10		11-Feb-91	27-Sep-91	32.57	7.60	0.62	bri	19-Nov-63	c	27-3
	m	15		30-Jan-78	27-Sep-91	712.57	166.27	13.67	lab	17-Mar-57	n	20-11
	m	6		6-Jul-87	27-Sep-91	220.57	51.47	4.23	scaf	23-Aug-64	n	22-11
	m	14		4-Mar-91	27-Sep-91	29.57	6.90	0.57	engi	16-May-62	o	28-10
	m	15		11-Aug-86	27-Sep-91	267.57	62.43	5.13	plu	17-Apr-70	o	16-4
	m	15		1-Sep-75	27-Sep-91	838.57	195.67	16.08	elect	20-Dec-58	o	16-9
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	bri	21-Nov-74	n	16-8
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	elect	4-Apr-75	o	16-3
	m	15		5-Aug-80	27-Sep-91	581.43	135.67	11.15	elect	20-Jan-64	o	16-7
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	pai	12-Jul-73	o	16-2
	m	13		2-Sep-74	27-Sep-91	890.57	207.80	17.08	gro	17-Sep-55	n	18-12
	m	13		6-Jan-70	27-Sep-91	1133.43	264.47	21.74	wm	22-Oct-54	c	15-3
	m	15		12-Jun-78	27-Sep-91	693.57	161.83	13.30	pai	21-Mar-46	c	32-3

	m	6		11-Feb-91	27-Sep-91	32.57	7.60	0.62	joi	22-Jan-47	c	44-1
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	22-Jun-74	o	17-1
	m	13		14-Jun-73	27-Sep-91	954.14	222.63	18.30	joi	12-Jul-47	c	25-12
	m	15		7-Aug-78	27-Sep-91	685.57	159.97	13.15	joi	4-Jan-62	o	16-8
	m	1		4-Feb-91	27-Sep-91	33.57	7.83	0.64	joi	14-Feb-57	c	33-12
	m	8		13-Aug-84	27-Sep-91	371.57	86.70	7.13	pai	29-Aug-68	o	15-12
	m	2		25-Feb-91	27-Sep-91	30.57	7.13	0.59	plu	3-Jul-60	c	30-8
	m	15		4-Aug-75	27-Sep-91	842.57	196.60	16.16	plu	14-Oct-33	c	41-10
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	plu	3-Jul-75	o	15-12
	m	15		12-Aug-85	27-Sep-91	319.57	74.57	6.13	joi	6-Oct-63	c	21-11
	m	10		12-May-75	27-Sep-91	854.57	199.40	16.39	gro	13-Apr-53	n	22-1
	m	15		13-Dec-85	27-Sep-91	302.00	70.47	5.79	joi	28-Apr-43	c	42-8
	f	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	elect	17-Sep-74	o	16-10
	m	15		12-Jun-78	27-Sep-91	693.57	161.83	13.30	pai	23-Feb-54	c	24-4
	m	15		5-Aug-80	27-Sep-91	581.43	135.67	11.15	pai	13-Aug-62	o	17-12
	m	15		19-Jun-78	27-Sep-91	692.57	161.60	13.28	pai	18-Feb-45	c	33-4
	m	8		1-Jun-86	27-Sep-91	277.71	64.80	5.33	joi	6-Apr-70	o	16-2
	m	15		30-May-78	27-Sep-91	695.43	162.27	13.34	gro	22-Apr-28	n	50-2
	m	15		7-Aug-78	27-Sep-91	685.57	159.97	13.15	plu	26-Apr-62	o	16-4
	m	8		7-Aug-78	27-Sep-91	685.57	159.97	13.15	roo	30-May-61	o	17-3
	m	15		12-Jun-78	27-Sep-91	693.57	161.83	13.30	pai	22-Feb-42	c	36-4
	m	2		8-May-90	27-Sep-91	72.43	16.90	1.39	elect	28-Aug-64	c	25-9
	m	6		11-Mar-91	27-Sep-91	28.57	6.67	0.55	elect	29-Sep-55	c	35-6
	m	8		1-Aug-77	27-Sep-91	738.57	172.33	14.16	elect	16-Oct-60	o	16-10
	m	15		6-Aug-79	27-Sep-91	633.57	147.83	12.15	elect	17-Jul-62	o	17-1
	m	15		13-May-85	27-Sep-91	332.57	77.60	6.38	pla	2-Mar-41	c	44-3
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	joi	22-Jun-72	o	17-2
	m	8		6-Aug-79	27-Sep-91	633.57	147.83	12.15	pai	12-Jun-62	o	17-2
	m	15		25-May-87	27-Sep-91	226.57	52.87	4.35	lab	8-Nov-65	n	21-7
	m	13		10-Feb-69	27-Sep-91	1180.57	275.47	22.64	plu	19-Feb-41	n	27-12
	m	13		23-Oct-72	27-Sep-91	987.57	230.43	18.94	lab	21-Nov-32	n	39-12
	m	13		1-Nov-71	27-Sep-91	1038.57	242.33	19.92	joi	24-Oct-46	c	25-1
	m	13		31-Jan-66	27-Sep-91	1338.57	312.33	25.67	dri	14-May-32	n	33-9
	m	7		5-Jun-89	27-Sep-91	120.57	28.13	2.31	gro	18-Oct-67	n	21-8
	m	8		4-Aug-81	27-Sep-91	529.43	123.53	10.15	plu	5-May-65	o	16-3
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	plu	7-Apr-73	o	16-5
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	pai	30-Mar-76	s	14-4

	m	15		24-Jun-91	27-Sep-91	13.57	3.17	0.26	gro	26-Aug-71	hnd	19-10
	m	15		22-Feb-82	27-Sep-91	500.57	116.80	9.60	joi	10-May-49	c	32-10
	m	14		9-Aug-85	27-Sep-91	320.00	74.67	6.14	pla	11-Feb-59	c	26-6
	m	15		12-Jun-78	27-Sep-91	693.57	161.83	13.30	pai	22-Nov-54	c	23-7
	m	15		5-Aug-80	27-Sep-91	581.43	135.67	11.15	elect	19-Dec-63	o	16-8
	m	15		16-Aug-77	27-Sep-91	736.43	171.83	14.12	plu	10-Jul-56	c	21-2
	m	15		29-Aug-77	27-Sep-91	734.57	171.40	14.09	elect	9-Dec-60	o	16-9
	m	15		8-Apr-80	27-Sep-91	598.43	139.63	11.48	gro	26-Apr-37	n	42-12
	m	13		12-Nov-73	27-Sep-91	932.57	217.60	17.88	joi	9-Mar-37	c	36-9
	m	15		10-Mar-76	27-Sep-91	811.29	189.30	15.56	joi	18-Sep-36	c	39-6
	m	15		5-Mar-91	27-Sep-91	29.43	6.87	0.56	pla	27-Mar-70	c	20-12
	m	15		3-Jun-91	27-Sep-91	16.57	3.87	0.32	gro	30-Nov-64	n	26-7
	m	13		7-Aug-72	27-Sep-91	998.57	233.00	19.15	pai	21-Sep-55	o	16-11
	m	15		17-Aug-87	27-Sep-91	214.57	50.07	4.12	gro	14-Oct-68	n	18-11
	m	15		29-Jun-80	27-Sep-91	586.71	136.90	11.25	engi	7-Jun-63	o	17-1
	m	13		29-Apr-74	27-Sep-91	908.57	212.00	17.42	lab	2-Jun-55	n	18-11
	m	13		4-Jan-68	27-Sep-91	1238.14	288.90	23.75	joi	31-Dec-51	c	16-1
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	pla	10-Sep-74	o	16-10
	m	7		20-Jun-89	27-Sep-91	118.43	27.63	2.27	gro	13-Feb-68	n	21-5
	f	14		14-May-84	27-Sep-91	384.57	89.73	7.38	clean	24-Jul-46	n	37-10
	m	14		7-May-85	27-Sep-91	333.43	77.80	6.39	elect	26-Mar-60	c	25-2
	m	8		22-Aug-83	27-Sep-91	422.57	98.60	8.10	bri	5-May-67	o	16-4
	m	6		5-Aug-85	27-Sep-91	320.57	74.80	6.15	plu	27-Mar-61	c	24-5
	m	13		26-Jul-71	27-Sep-91	1052.57	245.60	20.19	joi	30-Jul-55	c	15-12
	m	15		13-Aug-90	27-Sep-91	58.57	13.67	1.12	roo	6-Dec-75	h	14-9
	m	8		16-Aug-90	27-Sep-91	58.14	13.57	1.12	roo	6-Dec-73	o	16-9
	m	15		19-Feb-79	27-Sep-91	657.57	153.43	12.61	gro	2-Sep-58	n	20-6
	m	14		23-Nov-87	27-Sep-91	200.57	46.80	3.85	lab	8-Mar-58	n	29-9
	m	8		1-Jul-91	27-Sep-91	12.57	2.93	0.24	pai	3-Oct-74	h	16-9
	m	15		30-Aug-82	27-Sep-91	473.57	110.50	9.08	lab	2-May-52	n	30-4
	m	2		20-May-91	27-Sep-91	18.57	4.33	0.36	bri	16-Jan-66	c	25-5
	m	15		16-Aug-82	27-Sep-91	475.57	110.97	9.12	plu	7-Jan-66	o	16-8
	m	15		22-Aug-83	27-Sep-91	422.57	98.60	8.10	gar	5-Jul-67	o	16-2
	m	15		16-Jul-91	27-Sep-91	10.43	2.43	0.20	bri	9-Feb-62	c	29-6
	m	8		11-Aug-86	27-Sep-91	267.57	62.43	5.13	elect	5-Jun-70	o	16-3
	m	8		5-Aug-85	27-Sep-91	320.57	74.80	6.15	pai	22-May-69	o	16-3
	m	11		6-Aug-79	27-Sep-91	633.57	147.83	12.15	pai	31-Dec-62	o	16-8

	m	15		25-Feb-91	27-Sep-91	30.57	7.13	0.59	elect	7-Jun-49	c	41-9
	m	14		26-Aug-85	27-Sep-91	317.57	74.10	6.09	pla	16-Feb-65	c	20-7
	m	15		24-Apr-84	27-Sep-91	387.43	90.40	7.43	plu	21-Dec-46	c	37-5
	m	8		12-Mar-87	27-Sep-91	237.14	55.33	4.55	engi	20-Oct-69	h	17-5
	m	13		2-Feb-70	27-Sep-91	1129.57	263.57	21.66	pai	29-Mar-43	c	26-11
	m	15		12-Apr-90	27-Sep-91	76.14	17.77	1.46	lab	12-Jan-69	o	21-3
	m	6		8-Dec-86	27-Sep-91	250.57	58.47	4.81	lab	19-Jan-34	n	52-11
	m	14		10-Oct-85	27-Sep-91	311.14	72.60	5.97	elect	15-Nov-62	c	22-11
	m	15		11-Jun-84	27-Sep-91	380.57	88.80	7.30	joi	14-May-55	c	29-1
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	plu	26-Jul-71	o	16-1
	m	15		5-Aug-85	27-Sep-91	320.57	74.80	6.15	joi	17-Apr-68	h	17-4
	m	2		26-Nov-90	27-Sep-91	43.57	10.17	0.84	engi	21-Apr-54	c	36-8
	m	15		25-May-87	27-Sep-91	226.57	52.87	4.35	lab	6-Feb-70	n	17-4
	m	15		21-Apr-75	27-Sep-91	857.57	200.10	16.45	gro	8-Sep-31	n	43-8
	m	2		14-Jan-91	27-Sep-91	36.57	8.53	0.70	pla	8-Jan-58	c	33-1
	m	13		29-Apr-68	27-Sep-91	1221.57	285.03	23.43	joi	15-Apr-50	c	18-1
	m	15		19-May-86	27-Sep-91	279.57	65.23	5.36	gro	14-Jun-48	n	37-12
	m	2		5-Mar-90	27-Sep-91	81.57	19.03	1.56	lab	17-Jun-44	n	45-9
	m	15		29-Aug-77	27-Sep-91	734.57	171.40	14.09	plu	10-Jul-60	n	17-2
	m	7		7-Aug-86	27-Sep-91	268.14	62.57	5.14	lab	29-Jul-53	n	33-1
	m	1		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	27-Apr-50	c	41-3
	m	7		29-Oct-84	27-Sep-91	360.57	84.13	6.92	elect	13-May-40	c	44-6
	m	13		9-Dec-68	27-Sep-91	1189.57	277.57	22.81	pai	12-Aug-48	c	20-4
	m	1		11-Feb-91	27-Sep-91	32.57	7.60	0.62	pai	6-May-61	c	29-10
	m	7		20-Aug-84	27-Sep-91	370.57	86.47	7.11	gro	19-Apr-32	n	52-5
	m	7		10-Mar-86	27-Sep-91	289.57	67.57	5.55	gro	7-Dec-60	n	25-4
	m	15		18-Feb-80	27-Sep-91	605.57	141.30	11.61	plu	1-Jul-49	c	30-8
	m	15		5-Aug-80	27-Sep-91	581.43	135.67	11.15	elect	3-Mar-64	o	16-6
	m	13		7-Aug-72	27-Sep-91	998.57	233.00	19.15	joi	27-Jul-56	c	16-1
	m	6		21-May-90	27-Sep-91	70.57	16.47	1.35	gro	14-Jul-41	n	48-11
	m	15		18-Jul-75	27-Sep-91	845.00	197.17	16.21	elect	2-Jun-51	c	24-2
	m	13		15-May-69	27-Sep-91	1167.14	272.33	22.38	elect	17-Sep-35	c	33-8
	m	7		26-Aug-85	27-Sep-91	317.57	74.10	6.09	gro	30-Jun-60	n	25-2
	m	14		30-Jun-87	27-Sep-91	221.43	51.67	4.25	gro	18-Jan-71	n	16-6
	m	13		19-Mar-77	27-Sep-91	757.86	176.83	14.53	gro	9-Mar-38	n	39-1
	m	1		29-Oct-90	27-Sep-91	47.57	11.10	0.91	joi	12-Feb-69	c	21-9
	m	13		8-Apr-69	27-Sep-91	1172.43	273.57	22.48	plu	28-Jul-44	c	24-9

	m	15		7-Aug-78	27-Sep-91	685.57	159.97	13.15	pai	2-Aug-62	o	16-1
	m	15		4-Aug-81	27-Sep-91	529.43	123.53	10.15	plu	22-Feb-65	o	16-6
	m	15		8-Aug-88	27-Sep-91	163.57	38.17	3.14	elect	22-Mar-72	o	16-5
	m	6		11-Mar-91	27-Sep-91	28.57	6.67	0.55	elect	2-Mar-59	c	32-1
	m	2		25-Feb-91	27-Sep-91	30.57	7.13	0.59	joi	14-Feb-62	c	29-1
	m	15		18-Feb-80	27-Sep-91	605.57	141.30	11.61	lab	22-Dec-46	n	33-2
	m	15		30-Aug-91	27-Sep-91	4.00	0.93	0.08	joi	27-Feb-37	c	54-7
	m	8		13-Aug-84	27-Sep-91	371.57	86.70	7.13	elect	26-Sep-67	o	16-11
	m	15		17-Aug-81	27-Sep-91	527.57	123.10	10.12	elect	10-Feb-47	c	34-7
	m	13		18-Oct-83	27-Sep-91	414.43	96.70	7.95	roo	9-Sep-36	c	47-2
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	engi	31-Dec-72	h	16-8
	m	15		30-May-83	27-Sep-91	434.57	101.40	8.33	lab	31-Aug-61	n	21-9
	m	13		23-Mar-70	27-Sep-91	1122.57	261.93	21.53	joi	12-Aug-49	c	20-8
	m	15		17-Oct-77	27-Sep-91	727.57	169.77	13.95	plu	11-Feb-61	o	16-9
	m	13		15-Jan-73	27-Sep-91	975.57	227.63	18.71	pla	30-Apr-30	c	42-9
	m	13		29-Sep-64	27-Sep-91	1408.43	328.63	27.01	pla	2-Jan-30	c	34-9
	m	15		11-Aug-86	27-Sep-91	267.57	62.43	5.13	elect	12-Dec-69	h	16-8
	m	15		5-Aug-85	27-Sep-91	320.57	74.80	6.15	joi	31-Jan-68	h	17-7
	m	15		9-May-78	27-Sep-91	698.43	162.97	13.39	bri	26-Aug-47	c	30-9
	m	13		26-Sep-91	27-Sep-91	0.14	0.03	0.00	cha	24-Sep-56	c	35-1
	m	2		4-Mar-91	27-Sep-91	29.57	6.90	0.57	elect	25-Jan-56	c	35-2
	m	15		12-Dec-78	27-Sep-91	667.43	155.73	12.80	joi	30-Dec-33	c	44-12
	m	8		7-Aug-78	27-Sep-91	685.57	159.97	13.15	elect	28-Mar-62	o	16-5
	m	13		10-Jan-67	27-Sep-91	1289.43	300.87	24.73	pai	14-Jun-52	c	14-7
	m	13		21-Feb-66	27-Sep-91	1335.57	311.63	25.61	gro	27-Jun-47	n	18-8
	m	6		28-Aug-91	27-Sep-91	4.29	1.00	0.08	joi	6-Mar-60	c	31-6
	m	15		25-Oct-83	27-Sep-91	413.43	96.47	7.93	dri	3-Aug-38	n	45-3
	m	7		28-Nov-83	27-Sep-91	408.57	95.33	7.84	gro	10-Oct-60	n	23-2
	m	15		15-Jun-87	27-Sep-91	223.57	52.17	4.29	gro	1-Feb-36	n	51-5
	m	15		13-Aug-84	27-Sep-91	371.57	86.70	7.13	pai	21-Jul-68	o	16-1
	m	15		26-May-86	27-Sep-91	278.57	65.00	5.34	lab	7-Feb-63	n	23-4
	m	14		4-Sep-89	27-Sep-91	107.57	25.10	2.06	dri	28-Oct-64	n	24-11
	m	15		1-Jul-91	27-Sep-91	12.57	2.93	0.24	bri	16-Oct-74	n	16-9
	m	6		21-May-90	27-Sep-91	70.57	16.47	1.35	gar	24-Feb-61	n	29-3
	m	13		14-Feb-72	27-Sep-91	1023.57	238.83	19.63	plu	13-May-47	c	24-10
	m	13		2-Aug-71	27-Sep-91	1051.57	245.37	20.17	elect	13-Mar-55	c	16-5
	m	13		23-Sep-74	27-Sep-91	887.57	207.10	17.02	joi	4-Apr-49	c	25-6

	m	13		6-Jan-65	27-Sep-91	1394.29	325.33	26.74	joi	5-Dec-48	c	16-2
	m	13		19-Dec-62	27-Sep-91	1501.29	350.30	28.79	elect	27-Sep-39	c	23-3
	m	8		7-Aug-78	27-Sep-91	685.57	159.97	13.15	pai	3-Jan-62	o	16-8
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	pai	12-Feb-73	h	16-7
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	joi	15-Dec-72	h	16-8
	m	8		11-Aug-86	27-Sep-91	267.57	62.43	5.13	plu	14-May-70	o	16-3
	m	1		14-Jan-91	27-Sep-91	36.57	8.53	0.70	pai	10-Dec-52	c	38-2
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	engi	17-Apr-71	o	16-4
	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	joi	15-Jul-71	o	16-1
	m	13		27-Jan-81	27-Sep-91	556.43	129.83	10.67	lab	3-Jan-40	n	41-1
	m	13		8-Nov-71	27-Sep-91	1037.57	242.10	19.90	elect	26-Jul-49	c	22-4
	m	13		2-Sep-74	27-Sep-91	890.57	207.80	17.08	gro	26-Mar-45	n	29-6
	m	13		5-Mar-62	27-Sep-91	1542.57	359.93	29.58	gar	25-Jan-47	n	15-2
	m	13		28-Feb-66	27-Sep-91	1334.57	311.40	25.59	lab	10-Apr-43	n	22-11
	m	15		12-Aug-74	27-Sep-91	893.57	208.50	17.14	joi	25-Apr-52	c	22-4
	m	15		1-Oct-79	27-Sep-91	625.57	145.97	12.00	joi	8-Aug-56	c	23-2
	m	15		17-Oct-77	27-Sep-91	727.57	169.77	13.95	pai	27-Sep-61	o	16-1
	m	15		20-Sep-82	27-Sep-91	470.57	109.80	9.02	engi	26-Jun-63	o	19-3
	m	10		3-Aug-87	27-Sep-91	216.57	50.53	4.15	joi	22-Dec-70	h	16-8
	m	8		11-Aug-86	27-Sep-91	267.57	62.43	5.13	joi	26-Jul-70	o	16-1
	m	10		17-Apr-79	27-Sep-91	649.43	151.53	12.45	pai	2-Dec-39	c	39-5
	m	13		1-Feb-61	27-Sep-91	1599.29	373.17	30.67	roo	24-Mar-40	c	20-11
	m	15		15-Aug-77	27-Sep-91	736.57	171.87	14.13	dri	26-Sep-34	n	42-11
	m	10		26-Mar-91	27-Sep-91	26.43	6.17	0.51	elect	20-Apr-42	c	48-12
	m	13		12-May-80	27-Sep-91	593.57	138.50	11.38	cha	13-Mar-31	c	49-3
	m	15		3-Aug-87	27-Sep-91	216.57	50.53	4.15	elect	2-Jun-70	h	17-3
	m	8		30-Jul-90	27-Sep-91	60.57	14.13	1.16	elect	18-Apr-73	o	17-4
	m	15		17-Jul-90	27-Sep-91	62.43	14.57	1.20	plu	10-Dec-72	o	17-8
	m	10		21-Jun-82	27-Sep-91	483.57	112.83	9.27	gro	8-Feb-52	n	30-5
	m	7		13-Jul-81	27-Sep-91	532.57	124.27	10.21	gro	9-Mar-51	n	30-5
	m	10		20-Aug-90	27-Sep-91	57.57	13.43	1.10	lab	7-Oct-71	n	18-11
	m	7		25-Mar-91	27-Sep-91	26.57	6.20	0.51	joi	29-Apr-38	c	52-11
	m	1		11-Feb-91	27-Sep-91	32.57	7.60	0.62	pai	17-Aug-66	c	24-6
	m	10		7-Aug-78	27-Sep-91	685.57	159.97	13.15	elect	1-Sep-61	o	16-12
	m	8		8-Jul-91	27-Sep-91	11.57	2.70	0.22	elect	30-Jan-68	h	23-6
	m	10		12-Apr-76	27-Sep-91	806.57	188.20	15.47	lab	19-Feb-45	n	31-2
	m	7		22-May-87	27-Sep-91	227.00	52.97	4.35	gro	6-Nov-63	n	23-7

	m	8		5-Aug-80	27-Sep-91	581.43	135.67	11.15	joi	16-May-63	o	17-3
	m	8		8-Aug-88	27-Sep-91	163.57	38.17	3.14	elect	1-Sep-72	h	15-12
	m	8		5-Aug-85	27-Sep-91	320.57	74.80	6.15	plu	31-Mar-69	o	16-5
	m	6		11-Jul-91	27-Sep-91	11.14	2.60	0.21	joi	25-Mar-71	c	20-4
	m	2		4-Feb-91	27-Sep-91	33.57	7.83	0.64	joi	1-Nov-68	c	22-4
	m	10		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	19-Apr-74	o	17-3
	m	10		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	8-Apr-75	o	16-3
	m	10		30-Jun-86	27-Sep-91	273.57	63.83	5.25	elect	1-Sep-41	c	44-10
	m	15		11-Aug-86	27-Sep-91	267.57	62.43	5.13	gar	31-Oct-69	h	16-10
	m	15		13-Mar-78	27-Sep-91	706.57	164.87	13.55	plu	20-Apr-55	o	22-11
	m	13		1-Apr-91	27-Sep-91	25.57	5.97	0.49	joi	11-Feb-65	c	26-2
	m	13		7-May-74	27-Sep-91	907.43	211.73	17.40	cha	15-May-29	n	44-12
	m	10		16-Aug-82	27-Sep-91	475.57	110.97	9.12	joi	7-May-65	h	17-4
	m	13		29-Jan-62	27-Sep-91	1547.57	361.10	29.68	plu	15-Jan-45	c	17-1
	m	13		9-Jun-69	27-Sep-91	1163.57	271.50	22.32	elect	7-Sep-33	c	35-10
	m	13		24-Feb-64	27-Sep-91	1439.57	335.90	27.61	pla	24-Jun-48	c	15-9
	m	8		5-Aug-85	27-Sep-91	320.57	74.80	6.15	gar	10-Apr-69	o	16-4
	m	10		28-Jan-80	27-Sep-91	608.57	142.00	11.67	pai	16-Feb-56	c	23-12
	m	13		19-Jun-67	27-Sep-91	1266.57	295.53	24.29	joi	29-Mar-51	c	16-3
	m	15		27-Aug-79	27-Sep-91	630.57	147.13	12.09	lab	26-Oct-60	n	18-10
	m	10		5-Feb-79	27-Sep-91	659.57	153.90	12.65	pai	23-Jul-52	c	26-7
	m	14		27-Feb-78	27-Sep-91	708.57	165.33	13.59	lab	9-Jun-47	n	30-9
	m	15		18-Feb-81	27-Sep-91	553.29	129.10	10.61	plu	20-Oct-55	c	25-5
	m	7		11-Feb-85	27-Sep-91	345.57	80.63	6.63	engi	18-Jul-52	c	32-7
	m	10		17-Oct-77	27-Sep-91	727.57	169.77	13.95	pai	20-Mar-60	o	17-7
	m	10		13-May-91	27-Sep-91	19.57	4.57	0.38	joi	9-Jun-41	c	49-12
	m	10		13-May-91	27-Sep-91	19.57	4.57	0.38	bri	11-Jun-40	c	50-12
	m	6		18-Dec-90	27-Sep-91	40.43	9.43	0.78	pai	2-Jul-68	c	22-6
	m	14		26-May-86	27-Sep-91	278.57	65.00	5.34	lab	23-Jan-62	n	24-5
	m	8		13-Aug-84	27-Sep-91	371.57	86.70	7.13	joi	4-Mar-68	o	16-6
	m	8		13-Aug-84	27-Sep-91	371.57	86.70	7.13	joi	17-Feb-68	o	16-6
	m	10		19-Sep-78	27-Sep-91	679.43	158.53	13.03	lab	28-Oct-37	n	40-11
	m	6		14-Sep-84	27-Sep-91	367.00	85.63	7.04	lab	28-May-32	n	52-4
	m	8		14-Aug-89	27-Sep-91	110.57	25.80	2.12	roo	28-Mar-72	h	17-5
	m	8		5-Aug-80	27-Sep-91	581.43	135.67	11.15	joi	27-Feb-64	o	16-6
	m	13		25-Mar-91	27-Sep-91	26.57	6.20	0.51	elect	25-May-51	c	39-10
	f	10		24-Aug-82	27-Sep-91	474.43	110.70	9.10	joi	9-Jul-66	o	16-2

	m	8		3-Aug-87	27-Sep-91	216.57	50.53	4.15	roo	23-Apr-71	o	16-4
	m	15		13-May-91	27-Sep-91	19.57	4.57	0.38	roo	20-May-64	c	26-12
	m	13		21-Mar-59	27-Sep-91	1696.86	395.93	32.54	joi	20-Nov-36	c	22-4
	m	8		2-Jul-90	27-Sep-91	64.57	15.07	1.24	roo	19-Jan-74	o	16-6
	m	13		31-Jul-67	27-Sep-91	1260.57	294.13	24.18	pai	10-Aug-51	c	15-12
	m	8		5-Aug-85	27-Sep-91	320.57	74.80	6.15	pai	23-Mar-69	o	16-5
	m	10		1-Jul-91	27-Sep-91	12.57	2.93	0.24	joi	26-Dec-74	h	16-7
	m	7		22-Aug-83	27-Sep-91	422.57	98.60	8.10	roo	19-Apr-59	c	24-5
	m	15		13-Mar-78	27-Sep-91	706.57	164.87	13.55	joi	5-Dec-55	c	22-4
	m	10		5-Aug-85	27-Sep-91	320.57	74.80	6.15	bri	12-Dec-68	h	16-8
	m	10		2-Jul-90	27-Sep-91	64.57	15.07	1.24	roo	2-Aug-74	o	15-11
	m	10		11-Aug-86	27-Sep-91	267.57	62.43	5.13	elect	25-Nov-69	o	16-9
	m	13		26-Apr-63	27-Sep-91	1483.00	346.03	28.44	lab	2-Aug-37	n	25-9
	m	14		12-Sep-88	27-Sep-91	158.57	37.00	3.04	fit	20-Sep-41	c	46-12
	m	10		28-Jun-84	27-Sep-91	378.14	88.23	7.25	joi	18-Jul-34	c	49-12
	m	15		28-Feb-77	27-Sep-91	760.57	177.47	14.59	plu	12-Dec-53	c	23-3
	m	2		5-Oct-90	27-Sep-91	51.00	11.90	0.98	pai	27-Feb-66	n	24-8
	m	7		5-May-87	27-Sep-91	229.43	53.53	4.40	pai	31-Oct-48	c	38-7
	m	10		19-Jul-80	27-Sep-91	583.86	136.23	11.20	joi	25-Nov-46	c	33-8
	m	6		11-Mar-91	27-Sep-91	28.57	6.67	0.55	elect	27-Sep-53	c	37-6
	m	15		30-Mar-78	27-Sep-91	704.14	164.30	13.50	fit	25-Jun-38	c	39-10
	m	10		23-Apr-90	27-Sep-91	74.57	17.40	1.43	lab	8-Jun-67	n	22-11
	m	13		16-Jun-73	27-Sep-91	953.86	222.57	18.29	roo	2-Mar-39	c	34-4
	m	6		1-Oct-90	27-Sep-91	51.57	12.03	0.99	pai	22-Jun-50	n	40-4
	m	2		11-Mar-91	27-Sep-91	28.57	6.67	0.55	pla	13-Oct-50	c	40-5
	m	8		13-Aug-84	27-Sep-91	371.57	86.70	7.13	bri	11-Feb-68	o	16-7
	m	7		26-Jun-87	27-Sep-91	222.00	51.80	4.26	joi	12-Jul-31	c	55-12
	m	10		5-Aug-85	27-Sep-91	320.57	74.80	6.15	joi	31-Aug-68	h	16-12

Organisation	Sex		Source	Date started	Date left	Lngth of Serv	Lngth of Serv	Lngth of Serv	Occupation	Date of Birth	Qualificatior	Age at start
No3						in weeks	in months	in years				years-m
						0.00	0.00	0.00				00-1
	m	13	internal	21-Feb-90	9-Aug-90	24.14	5.63	0.46	operator	not available	nil	22
	m	15	letter	16-Sep-88	9-Aug-90	98.86	23.07	1.90	operator	ditto	nil	21
	m	15	letter	7-Nov-88	9-Aug-90	91.43	21.33	1.75	operator	ditto	nil	21
	m	15	letter	18-Jul-88	9-Aug-90	107.43	25.07	2.06	operator		nil	24
	m	15	letter	14-Apr-87	9-Aug-90	173.29	40.43	3.32	operator		nil	32
	m	14	job centre	1-Jun-87	9-Aug-90	166.43	38.83	3.19	operator		nil	41
	m	15	letter	2-Apr-90	9-Aug-90	18.43	4.30	0.35	operator		nil	16
	m	15	letter	28-May-90	9-Aug-90	10.43	2.43	0.20	operator		nil	18
	m	14	job centre	28-May-90	9-Aug-90	10.43	2.43	0.20	operator		nil	18
	m	13	internal	26-Mar-90	9-Aug-90	19.43	4.53	0.37	operator		nil	25
	m	13	internal	15-Jun-88	9-Aug-90	112.14	26.17	2.15	operator		nil	33
	m	15	letter	6-Apr-88	9-Aug-90	122.14	28.50	2.34	operator		nil	23
	m	15	letter	28-Mar-88	9-Aug-90	123.43	28.80	2.37	operator		nil	22
	m	14	job centre	21-Mar-88	9-Aug-90	124.43	29.03	2.39	operator		nil	29
	m	15	letter	8-Feb-88	9-Aug-90	130.43	30.43	2.50	operator		nil	19
	m	15	letter	11-Jan-88	9-Aug-90	134.43	31.37	2.58	operator		nil	36
	m	14	job centre	16-Mar-87	9-Aug-90	177.43	41.40	3.40	operator		nil	36
	m	15	letter	12-Jan-87	9-Aug-90	186.43	43.50	3.58	operator		nil	25
	m	13	internal	20-Oct-86	9-Aug-90	198.43	46.30	3.81	operator		nil	30
	m	15	letter	14-Oct-86	9-Aug-90	199.29	46.50	3.82	operator		nil	18
	m	13	internal	25-Aug-86	9-Aug-90	206.43	48.17	3.96	operator		nil	25
	m	15	letter	16-Jun-86	9-Aug-90	216.43	50.50	4.15	operator		nil	27
	m	13	internal	29-Jul-85	9-Aug-90	262.43	61.23	5.03	operator		nil	35
	m	15	letter	28-May-90	9-Aug-90	10.43	2.43	0.20	operator		nil	20
	m	15	letter	28-May-90	9-Aug-90	10.43	2.43	0.20	operator		nil	57
	m	15	letter	5-Sep-88	9-Aug-90	100.43	23.43	1.93	operator		nil	28
	m	15	letter	7-May-90	9-Aug-90	13.43	3.13	0.26	operator		nil	30
	m	15	letter	23-Apr-90	9-Aug-90	15.43	3.60	0.30	operator		nil	38
	m	15	letter	2-Apr-90	9-Aug-90	18.43	4.30	0.35	operator		nil	34
	m	13	internal	14-Jan-90	9-Aug-90	29.57	6.90	0.57	operator		nil	25
	m	13	internal	14-Jan-90	9-Aug-90	29.57	6.90	0.57	operator		nil	21
	m	15	letter	18-Sep-87	16-Oct-87	4.00	0.93	0.08	engineer		c&g	25
	m	14	job centre	21-Dec-87	4-Mar-88	10.57	2.47	0.20	operator		o grade	24

	m	14	job centre	11-Jan-88	1-Mar-89	59.29	13.83	1.14	operator		o grade	28
	m	14	job centre	14-Jan-88	1-Mar-89	58.86	13.73	1.13	operator		nil	34
	m	14	job centre	22-Jan-88	4-Jul-88	23.43	5.47	0.45	operator		nil	36
	m	13	internal	20-Mar-87	11-Jul-87	16.14	3.77	0.31	operator		o grade	31
	m	13	internal	14-Feb-88	28-Apr-89	62.71	14.63	1.20	operator		c&g	33
	m	14	job centre	15-Feb-88	24-Jun-88	18.57	4.33	0.36	operator		nil	24
	m	15	letter	15-Feb-88	2-Jun-88	15.43	3.60	0.30	operator		c&g	41
	m	15	letter	1-May-88	24-Jun-88	7.71	1.80	0.15	operator		nil	39
	m	15	letter	17-Mar-88	#######	21.14	4.93	0.41	operator		o grade	20
	m	15	letter	14-May-87	22-Sep-89	123.14	28.73	2.36	operator		nil	20
	m	14	job centre	2-May-88	#######	67.57	15.77	1.30	operator		o grade	18
	f	13	internal	13-Jul-88	#######	57.86	13.50	1.11	operator		o grade	18
	m	15	letter	7-Sep-88	7-Apr-89	30.29	7.07	0.58	operator		o grade	18
	m	15	letter	19-Sep-88	2-May-89	32.14	7.50	0.62	operator		c&g	37
	m	15	letter	15-Jun-88	#######	61.86	14.43	1.19	operator		o grade	19
	m	15	letter	20-Jan-89	27-Jan-89	1.00	0.23	0.02	operator		nil	24
	m	15	letter	6-Apr-88	23-Feb-90	98.29	22.93	1.88	operator		o grade	28
	m	13	internal	1-Jul-88	#######	59.57	13.90	1.14	operator		nil	23
	m	13	internal	19-Sep-88	#######	35.29	8.23	0.68	operator		o grade	21
	m	14	job center	15-Sep-88	#######	48.71	11.37	0.93	operator		nil	23
	m	15	letter	25-Apr-88	#######	69.14	16.13	1.33	operator		nil	20
	m	15	letter	12-Jun-87	20-Oct-89	123.00	28.70	2.36	operator		nil	32
	m	14	job centre	23-Apr-90	8-Jun-90	6.57	1.53	0.13	operator		nil	24
	m	14	job centre	28-May-90	31-Jul-90	9.14	2.13	0.18	operator		o grade	34
	m	15	letter	5-Apr-85	#######	154.43	36.03	2.96	operator		hnc	22
	m	6	referred	30-Oct-85	21-Oct-88	155.29	36.23	2.98	operator		o grade	25
	m	13	internal	12-Jun-85	9-Aug-90	269.14	62.80	5.16	operator		nil	21
	f	14	job centre	5-May-86	22-Jul-88	115.57	26.97	2.22	operator		nil	20
	m	14	job centre	19-May-86	#######	97.43	22.73	1.87	operator		o grade	33
	m	14	job centre	26-Jun-86	8-Apr-88	93.14	21.73	1.79	operator		o grade	29
	m	13	internal	15-Sep-86	2-Sep-88	102.57	23.93	1.97	operator		nil	23
	m	15	letter	5-Jan-87	21-Oct-88	93.57	21.83	1.79	operator		c&g	25
	m	13	internal	13-Feb-87	#######	56.71	13.23	1.09	operator		nil	22
	m	13	internal	23-Feb-87	22-Jan-89	99.86	23.30	1.92	operator		o grade	20
	m	13	internal	22-Jan-87	#######	96.71	22.57	1.85	operator		c&g	35
	m	13	internal	25-Jan-87	16-Oct-87	37.71	8.80	0.72	operator		nil	24

	f	13	internal	2-Mar-87	1-Jul-88	69.57	16.23	1.33	operator		o grade	20
	m	13	internal	9-Mar-87	#######	114.57	26.73	2.20	operator		nil	25
	m	14	job centre	17-Mar-87	#######	75.43	17.60	1.45	operator		o grade	27
	m	15	letter	10-Jun-87	#######	48.29	11.27	0.93	engineer		c&g	25
	m	14	job centre	15-Jun-87	5-Nov-88	72.71	16.97	1.39	operator		c&g	30
	m	15	letter	19-Jun-87	24-Jun-90	157.29	36.70	3.02	operator		c&g	24
	f	15	letter	7-Sep-87	16-Oct-87	5.57	1.30	0.11	packer		nil	23
	m	13	internal	7-Sep-87	30-Oct-87	7.57	1.77	0.15	operator		h grade	19
	f	13	internal	17-Apr-87	9-Aug-90	172.86	40.33	3.32	admin		h grade	18
	m	14	job centre	9-Sep-87	28-Apr-88	33.14	7.73	0.64	operator		o grade	33
	m	15	letter	1-Aug-88	9-Aug-90	105.43	24.60	2.02	operator		o grade	28
	m	14	job centre	7-Mar-88	9-Aug-90	126.43	29.50	2.42	operator		o grade	22
	m	14	job centre	28-Feb-88	9-Aug-90	127.57	29.77	2.45	operator		hnc	27
	f	15	letter	3-Oct-86	9-Aug-90	200.86	46.87	3.85	operator		o grade	21
	m	14	letter	12-Jan-87	9-Aug-90	186.43	43.50	3.58	operator		nil	22
	m	14	letter	3-Nov-86	9-Aug-90	196.43	45.83	3.77	operator		nil	26
	m	13	internal	9-Feb-87	9-Aug-90	182.43	42.57	3.50	operator		o grade	28
	m	13	internal	14-Oct-85	9-Aug-90	251.43	58.67	4.82	operator		c&g	28
	m	15	letter	15-Jun-87	5-Nov-87	20.43	4.77	0.39	operator		c&g	30
	m	14	job centre	19-Jun-87	9-Aug-90	163.86	38.23	3.14	operator		o grade	25
	m	14	job centre	16-Apr-87	#######	6.14	1.43	0.12	operator		nil	33
	m	15	letter	10-Jun-87	#######	48.29	11.27	0.93	operator		o grade	26
	f	15	letter	7-Sep-87	16-Oct-87	5.57	1.30	0.11	operator		nil	24
	m	15	lettter	7-Sep-87	30-Oct-87	7.57	1.77	0.15	operator		nil	20
	m	15	letter	29-Apr-88	1-Jun-89	56.86	13.27	1.09	operator		nil	25
	m	15	letter	12-May-88	5-Aug-88	12.14	2.83	0.23	operator		o grade	22
	m	15	letter	20-Jun-88	21-Jul-89	56.57	13.20	1.08	operator		nil	30
	m	15	letter	20-Jun-88	#######	99.43	23.20	1.91	operator		nil	25
	m	15	letter	18-Oct-88	9-Aug-90	94.29	22.00	1.81	operator		nil	33
	m	14	job centre	20-Jan-89	27-Jan-89	1.00	0.23	0.02	operator		nil	29
	m	15	unknown	15-Jun-88	9-Aug-90	112.14	26.17	2.15	operator		nil	20
	m	15	unknown	31-Oct-88	27-Jan-89	12.57	2.93	0.24	operator		nil	30

Organisation	Sex	Numbr	Source	Date started	Date left	Lngth of Serv	Lngth of Serv	Lngth of Serv	Occupation	Date of Birth	Qualifications	Age at start
No4						in weeks	in months	in years				years-m
						0.00	0.00	0.00				00-1
	f	9	coll/univ	17-Nov-86	16-May-89	130.14	30.37	2.50	audio typ	24-Jun-70	nil	16-5
	f	15	not known	5-Sep-88	16-May-89	36.14	8.43	0.69	typist	19-Aug-72	nil	16-1
	f	15	not known	4-Apr-88	16-May-89	58.14	13.57	1.12	recept	28-Jun-68	nil	19-10
	m	15	not known	31-Oct-88	16-May-89	28.14	6.57	0.54	app surv	9-Apr-65	nil	23-7
	m	1	local press	14-Mar-88	16-May-89	61.14	14.27	1.17	surv	5-Jan-47	arics	41-3
	f	1	local press	16-Jan-86	16-May-89	173.71	40.53	3.33	typist	2-Nov-53	nil	32-3
	f	1	local press	21-Jun-88	16-May-89	47.00	10.97	0.90	clerkess	17-Mar-64	nil	24-4
	f	1	local press	20-May-86	16-May-89	156.00	36.40	2.99	typist	24-Apr-51	nil	35-1
	m	6	referred	6-Apr-87	16-May-89	110.14	25.70	2.11	land agent	18-Apr-64	h grade	22-12
	m	2	national press	16-May-88	16-May-89	52.14	12.17	1.00	app surv	28-Dec-57	h grade	30-5
	f	1	local press	18-Nov-88	16-May-89	25.57	5.97	0.49	typist	26-Oct-55	nil	33-1
	m	1	local press	7-Oct-85	16-May-89	188.14	43.90	3.61	app surv	25-Aug-67	h grade	18-2
	m	11	training agency	14-Jul-86	16-May-89	148.14	34.57	2.84	clerk	7-Jul-69	nil	17-1
	m	3	trade journal	29-Jun-87	16-May-89	98.14	22.90	1.88	surv	1-May-62	h grade	25-2
	f	2	national press	18-Jul-88	16-May-89	43.14	10.07	0.83	recept	29-Jun-66	nil	22-1
	f	1	local press	26-Sep-88	16-May-89	33.14	7.73	0.64	typist	8-Sep-47	nil	41-1
	f	1	local press	12-Oct-88	16-May-89	30.86	7.20	0.59	recept	19-Jan-69	nil	19-9
	m	1	local press	29-Aug-88	16-May-89	37.14	8.67	0.71	surv	25-Nov-56	h grade	31-10
	f	1		17-Dec-84	16-May-89	230.14	53.70	4.41	secretary	8-Sep-47	nil	37-4
	f	1		14-Jul-86	16-May-89	148.14	34.57	2.84	manager	3-Jan-60	nil	26-7
	f	11		23-Jun-86	16-May-89	151.14	35.27	2.90	clerk	3-Dec-68	nil	17-7
	m	3		23-Mar-87	16-May-89	112.14	26.17	2.15	surv	16-Sep-61	arics	25-7
	m	1		26-May-86	16-May-89	155.14	36.20	2.98	surv	18-Jun-63	h grade	22-12
	m	2		1-Sep-86	16-May-89	141.14	32.93	2.71	surv	5-Oct-54	arics	31-11
	f	11		1-Dec-86	16-May-89	128.14	29.90	2.46	typist	26-Jan-69	nil	17-11
	m	1		1-Apr-85	16-May-89	215.14	50.20	4.13	app surv	1-Jun-67	h grade	17-10
	f	1		4-Jul-88	16-May-89	45.14	10.53	0.87	secretary	26-Sep-72	nil	15-10
	m	1		10-Nov-86	16-May-89	131.14	30.60	2.52	app surv	18-Feb-68	h grade	18-9
	m	15		6-Mar-84	16-May-89	271.00	63.23	5.20	app surv	9-Sep-58	h grade	25-6
	f	1		25-Aug-86	16-May-89	142.14	33.17	2.73	surv	16-Mar-67	nil	19-6
	f	1		1-Dec-88	16-May-89	23.71	5.53	0.45	clerkess	8-Feb-71	nil	17-10

	m	15		1-Mar-85	16-May-89	219.57	51.23	4.21	surv	25-Jul-30	arics	54-8
	m	3		13-Jul-87	16-May-89	96.14	22.43	1.84	surv	10-Apr-57	arics	30-4
	f	9		15-Aug-88	16-May-89	39.14	9.13	0.75	secretary	24-Sep-69	nil	18-11
	f	1		26-Feb-88	16-May-89	63.57	14.83	1.22	clerkess	7-Apr-34	nil	53-11
	f	1		3-Oct-88	16-May-89	32.14	7.50	0.62	typist	13-Dec-69	nil	18-10
	f	3		19-Jan-87	16-May-89	121.14	28.27	2.32	surv	16-May-61	arics	25-9
	f	1		1-Jun-87	16-May-89	102.14	23.83	1.96	secretary	14-Jun-67	nil	19-12
	f	1		1-Mar-88	16-May-89	63.00	14.70	1.21	secretary	5-Aug-63	nil	24-7
	f	7	re-employ	3-Mar-86	16-May-89	167.14	39.00	3.21	surv	10-Dec-58	arics	27-3
	f	3		29-Sep-88	16-May-89	32.71	7.63	0.63	surv	9-Mar-67	h grade	21-7
	m	3		1-Dec-87	16-May-89	76.00	17.73	1.46	app surv	6-Oct-64	h grade	23-2
	f	2		20-May-85	16-May-89	208.14	48.57	3.99	accountant	7-Jun-61	nil	23-12
	f	1		2-Feb-87	16-May-89	119.14	27.80	2.28	junior	4-Feb-69	nil	17-12
	m	1		20-Sep-86	16-May-89	138.43	32.30	2.65	app surv	2-Feb-67	h grade	19-8
	m	1		11-Nov-85	16-May-89	183.14	42.73	3.51	surv	4-Nov-61	arics	24-1
	m	3		28-Nov-88	16-May-89	24.14	5.63	0.46	surv	28-Apr-58	arics	30-8
	m	3		10-Mar-86	16-May-89	166.14	38.77	3.19	surv	27-May-52	arics	33-10
	m	1		18-Feb-85	16-May-89	221.14	51.60	4.24	surv	17-Apr-63	arics	21-11
	m	3		7-Mar-88	16-May-89	62.14	14.50	1.19	app surv	10-Jun-64	arics	23-9
	f	1		5-Mar-86	16-May-89	166.86	38.93	3.20	typist	29-Oct-56	nil	29-5
	f	1		10-Jan-85	16-May-89	226.71	52.90	4.35	secretary	16-Aug-50	nil	34-5
	f	1		29-Sep-86	16-May-89	137.14	32.00	2.63	typist	21-Oct-64	nil	21-12
	f	1		26-Sep-88	16-May-89	33.14	7.73	0.64	junior	26-Jun-71	nil	17-4
	f	1		11-Nov-85	16-May-89	183.14	42.73	3.51	typist	1-Sep-69	nil	16-3
	f	11		16-Jun-86	16-May-89	152.14	35.50	2.92	junior	21-Mar-69	nil	17-3
	m	12	head hunted	31-Oct-88	16-May-89	28.14	6.57	0.54	surv	22-Mar-59	arics	29-8
	m	3		12-Aug-88	16-May-89	39.57	9.23	0.76	surv	14-Dec-57	arics	30-8
	m	1		31-Mar-86	16-May-89	163.14	38.07	3.13	app surv	11-Nov-63	arics	22-5
	m	12	head hunted	15-Jul-87	16-May-89	95.86	22.37	1.84	surv	14-Feb-58	arics	29-5
	m	1		1-May-86	16-May-89	158.71	37.03	3.04	surv	28-Jun-64	arics	21-11
	m	3		27-Sep-88	5-May-89	31.43	7.33	0.60	manager	27-Jul-56	arics	32-3
	f	1		21-Sep-88	16-May-89	33.86	7.90	0.65	junior	1-May-71	nil	17-5
	f	15		15-Aug-88	16-May-89	39.14	9.13	0.75	app surv	1-Feb-65	h grade	23-7
	f	1		8-Feb-88	16-May-89	66.14	15.43	1.27	typist	5-Feb-66	nil	22-1

	f	1		3-Mar-86	16-May-89	167.14	39.00	3.21	recept	3-Jun-47	nil	38-9
	f	4	recruit agency	25-Apr-88	16-May-89	55.14	12.87	1.06	typist	10-Aug-69	nil	18-9
	f	1		3-Nov-86	16-May-89	132.14	30.83	2.53	surv	15-May-63	arics	23-6
	m	1		2-Sep-85	16-May-89	193.14	45.07	3.70	app surv	21-Apr-66	h grade	19-5
	f	1		14-Nov-88	16-May-89	26.14	6.10	0.50	typist	17-Oct-67	nil	21-1
	m	7		6-Jan-86	16-May-89	175.14	40.87	3.36	surv	9-Jun-34	frics	51-7
	m	15		3-Jun-85	16-May-89	206.14	48.10	3.95	surv	11-Oct-55	arics	29-8
	f	1		1-Feb-86	16-May-89	171.43	40.00	3.29	junior	2-Dec-68	nil	17-3
	f	1		5-Jun-86	16-May-89	153.71	35.87	2.95	typist	3-May-54	nil	32-2
	f	1		1-Jul-85	16-May-89	202.14	47.17	3.88	clerkess	22-Aug-61	nil	23-11
	f	7	re-employed	4-Jul-85	17-Jun-88	154.14	35.97	2.96	typist	3-Feb-66	nil	19-5
	f	1		17-Oct-88	16-May-89	30.14	7.03	0.58	app surv	27-Mar-68	h grade	20-7
	f	6	referred	7-Nov-88	16-May-89	27.14	6.33	0.52	typist	6-Mar-57	nil	31-9
	f	1		18-May-87	16-May-89	104.14	24.30	2.00	junior	16-Apr-68	nil	19-1
	f	1		1-Apr-86	16-May-89	163.00	38.03	3.13	typist	16-Sep-67	nil	18-7
	f	1		13-Jun-88	16-May-89	48.14	11.23	0.92	secretary	14-Apr-58	nil	30-3
	f	1		6-Jun-84	16-May-89	257.86	60.17	4.95	telephonist	11-Apr-60	nil	24-2
	m	1		1-Apr-85	27-May-88	164.57	38.40	3.16	app surv	11-Aug-60	arics	24-8
	f	4		1-Jun-88	26-Aug-88	12.29	2.87	0.24	junior	29-Oct-71	nil	16-8
	f	1		20-Jun-88	29-Jul-88	5.57	1.30	0.11	typist	23-Mar-62	nil	26-3
	f	1		15-Jun-87	8-Jul-88	55.57	12.97	1.07	typist	5-Oct-69	nil	17-9
	f	15		22-Jun-87	31-Aug-88	62.29	14.53	1.19	app surv	26-Mar-62	nil	25-3
	f	1		13-Jun-88	23-Sep-88	14.57	3.40	0.28	junior	22-Dec-70	nil	17-6
	m	7		20-Jun-88	5-Aug-88	6.57	1.53	0.13	app surv	6-Dec-61	h grade	26-7
	f	1		13-Jul-87	19-Aug-88	57.57	13.43	1.10	junior	19-Sep-68	nil	18-10
	f	1		3-Aug-87	29-Jul-88	51.57	12.03	0.99	recept	13-Jun-67	nil	20-2
	f	1		19-Oct-87	11-Nov-88	55.57	12.97	1.07	secretary	8-Dec-57	nil	29-11
	f	1		19-Oct-87	3-Jun-88	32.57	7.60	0.62	secretary	22-Dec-65	nil	21-10
	m	15		5-Mar-84	19-Aug-88	232.57	54.27	4.46	surv	19-Nov-56	arics	27-4
	f	1		15-Aug-88	16-Nov-88	13.29	3.10	0.25	typist	6-Aug-47	nil	41-1
	m	1		15-Oct-84	27-Sep-88	206.14	48.10	3.95	app surv	14-Jul-66	h grade	18-4
	m	7		13-May-85	24-Jun-88	162.57	37.93	3.12	app surv	22-Mar-59	h grade	26-2
	m	13	internal	1-Jun-85	26-Aug-88	168.86	39.40	3.24	surv	30-Apr-46	nil	39-2
	m	7		8-Jul-85	31-Dec-88	181.71	42.40	3.48	surv	14-Apr-59	arics	26-3

	m	10	call in	28-Oct-85	2-Sep-88	148.57	34.67	2.85	surv	7-Jan-58	arics	27-10
	m	6	referred	2-Jun-86	21-Oct-88	124.57	29.07	2.39	surv	22-Jan-56	arics	30-5
	m	1		1-Dec-86	23-Sep-88	94.57	22.07	1.81	app surv	17-Sep-65	h grade	21-3
	m	1		5-Jan-87	3-Feb-88	56.29	13.13	1.08	app surv	8-Jul-65	h grade	21-6
	f	1		1-Nov-88	6-Jan-89	9.43	2.20	0.18	typist	26-Apr-56	nil	32-7
	f	1		23-Feb-87	30-Sep-87	31.29	7.30	0.60	secretary	25-Aug-50	nil	36-6
	f	15	other	21-Apr-87	5-Feb-88	41.43	9.67	0.79	app surv	14-May-60	h grade	26-12
	f	9	college	23-Jun-84	16-May-89	255.43	59.60	4.90	typist	20-Jun-65	nil	19-1
	f	15		4-May-84	16-May-89	262.57	61.27	5.04	typist	14-Sep-29	nil	54-8
	f	15		6-May-84	16-May-89	262.29	61.20	5.03	typist	29-Jul-66	nil	17-10
	m	6		1-Jan-84	23-May-87	176.86	41.27	3.39	app surv	30-Sep-63	h grade	20-4
	f	15		10-Jan-84	31-Dec-87	207.29	48.37	3.98	app surv	9-May-60	h grade	23-9
	m	7		6-Jul-87	28-Aug-87	7.57	1.77	0.15	app surv	6-Dec-61	h grade	25-7
	f	1		21-Sep-87	5-Apr-88	28.14	6.57	0.54	secretary	5-Jul-46	nil	41-3
	m	15		3-Oct-85	10-Apr-87	79.14	18.47	1.52	surv	12-Dec-60	h grade	24-10
	f	15	acquisition	7-Jan-84	31-May-87	177.14	41.33	3.40	typist	11-Nov-43	nil	40-2
	f	1		30-Sep-85	31-Aug-87	100.00	23.33	1.92	typist	27-Nov-67	nil	17-11
	f	1		14-Oct-85	2-Oct-87	102.57	23.93	1.97	typist	3-Dec-68	nil	16-11
	f	1		26-May-86	28-Aug-87	65.57	15.30	1.26	secretary	6-Nov-66	nil	19-7
	f	2		23-Jun-86	20-Nov-87	73.57	17.17	1.41	comp op	14-Mar-69	nil	17-4
	f	1		26-Sep-86	25-Mar-88	78.00	18.20	1.50	typist	3-May-49	nil	37-5
	m	15		1-Jun-72	1-Oct-86	747.86	174.50	14.34	surv	1-Apr-53	arics	19-3
	m	15		16-Aug-83	26-Sep-84	58.14	13.57	1.12	app surv	19-Aug-64	h grade	18-12
	m	1		4-Feb-85	1-Jul-86	73.14	17.07	1.40	surv	19-Dec-58	arics	26-2
	m	1		6-Aug-84	31-Mar-86	86.00	20.07	1.65	surv	9-Aug-57	arics	26-12
	m	15		26-Mar-84	25-Apr-86	108.57	25.33	2.08	surv	19-Jul-57	arics	26-9
	m	6		10-Jun-85	28-Mar-87	93.71	21.87	1.80	surv	13-Jul-18	frics	66-11
	m	1		2-Sep-85	12-Sep-86	53.57	12.50	1.03	app surv	30-Mar-68	h grade	17-6
	m	1		2-Oct-85	1-Aug-86	43.29	10.10	0.83	surv	25-Feb-53	arics	32-8
	m	15		13-Sep-85	4-Nov-86	59.57	13.90	1.14	app surv	23-Jun-64	h grdae	21-3
	f	1		21-Oct-85	26-Sep-86	48.57	11.33	0.93	surv	26-Sep-63	arics	22-1
	m	1		12-May-86	31-Dec-86	33.29	7.77	0.64	surv	11-Jul-48	frics	37-10
	m	15		7-Jul-86	29-Aug-86	7.57	1.77	0.15	app surv	6-Dec-61	h grdae	24-7
	m	1		7-Jul-86	31-Dec-86	25.29	5.90	0.48	app surv	9-May-60	h grade	26-2

	m	1		8-Oct-82	31-Jul-85	146.71	34.23	2.81	accountant	21-Feb-57	c a	25-8
	m	1		21-Nov-83	31-Dec-85	110.14	25.70	2.11	surv	14-Oct-58	arics	25-2
	f	15		5-Jan-84	31-May-85	73.14	17.07	1.40	surv	25-Aug-59	arics	24-5
	m	1		1-Oct-80	30-Aug-85	256.29	59.80	4.92	app surv	6-Dec-61	h grade	18-10
	m	15		7-Jun-82	31-May-85	155.57	36.30	2.98	app surv	30-Sep-59	h grade	22-9
	m	1		7-Jan-85	4-Oct-85	38.57	9.00	0.74	surv	15-Sep-61	arics	23-4
	m	1		20-Jun-83	30-Aug-85	114.57	26.73	2.20	surv	19-Jul-58	arics	24-12
	m	1		26-Feb-83	7-Mar-86	157.86	36.83	3.03	app surv	16-Jul-59	h grade	23-8
	f	1		25-Jun-84	31-Dec-85	79.14	18.47	1.52	typist	2-Apr-67	nil	17-3
	f	1		3-Sep-84	31-May-85	38.57	9.00	0.74	recept	22-Apr-62	nil	22-5
	m	1		17-Jun-85	31-Dec-85	28.14	6.57	0.54	surv	18-Jan-59	arics	26-5
	m	15		1-Jul-85	3-Jul-85	0.29	0.07	0.01	app surv	9-May-67	h grade	18-2
	m	1		12-Dec-83	30-Nov-84	50.57	11.80	0.97	surv	21-Jan-61	arics	22-11
	f	1		6-Jun-77	29-Nov-85	442.57	103.27	8.49	typist	5-May-60	nil	17-1
	m	15		11-Jun-84	7-Dec-84	25.57	5.97	0.49	surv	23-Mar-61	arics	23-3
	m	15		24-Aug-84	30-Nov-84	14.00	3.27	0.27	surv	22-Jun-62	arics	22-3
	f	1		13-Jun-83	9-Nov-84	73.57	17.17	1.41	typist	21-Jun-65	nil	17-12
	f	1		31-Mar-80	10-Aug-84	227.57	53.10	4.36	typist	27-Sep-61	nil	18-7
	m	15	unknown	1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-40	frics	39-1
	m	15	unknown	1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-46	frics	33-1
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-46	frics	33-1
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-52	frics	27-1
	m	15	unknown	1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-49	frics	30-1
	m	15	unknown	1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-55	frics	24-1
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	surv	1-Jun-55	arics	24-1
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	surv	1-Jun-58	arics	21-1
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-58	arics	21-1
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-59	arics	20-1
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-58	arics	21-1
	m	13		4-Apr-86	16-May-89	162.57	37.93	3.12	partner	1-Jun-49	arics	36-11
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-61	arics	18-1
	m	15		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-24	frics	55-1
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-46	frics	33-1
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-45	frics	34-1

	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-48	frics	31-1
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-40	frics	39-1
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-48	frics	31-1
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-54	arics	25-1
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-60	arics	19-1
	m	15		1-Aug-85	16-May-89	197.71	46.13	3.79	partner	1-Jun-56	frics	29-3
	m	13	internal	1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-59	arics	20-1
	m	13		1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-59	arics	20-1
	m	12	head hunted	6-Feb-87	16-May-89	118.57	27.67	2.27	partner	1-Jun-50	arics	36-9
	m	4	recruit agency	1-Jul-79	16-May-89	515.29	120.23	9.88	partner	1-Jun-59	arics	20-1
	m	13		6-Aug-85	16-May-89	197.00	45.97	3.78	part sec	1-Jun-40	c a	45-3
	m	13		7-Jan-86	16-May-89	175.00	40.83	3.36	surv	1-Jun-34	frics	51-8

Organisation	Sex	Num	Source	Date started	Date left	Lngth of Serv	Lngth of Serv	Lngth of Serv	Occupation	Date of Birth	Qualifications	Age at start
No5						in weeks	in months	in years				years-m
	m	13		1-Nov-91	12-May-92	27.57	6.43	0.53	Admin	21-Dec-57	cipfa	33-11
	f	13		1-Apr-81	12-May-92	579.86	135.30	11.12	registrar	23-May-48	h grade	32-11
	f	13		2-May-89	12-May-92	158.00	36.87	3.03	admin	30-Jun-62	o grade	26-11
	f	13		8-May-78	12-May-92	731.14	170.60	14.02	clerkess	12-May-38	nil	39-12
	f	13		17-Apr-90	12-May-92	108.00	25.20	2.07	clerkess	18-Aug-54	nil	35-8
	f	13		1-Oct-91	12-May-92	32.00	7.47	0.61	clerkess	2-Jul-33	h grade	58-3
	f	14	job centre	31-Mar-80	12-May-92	632.14	147.50	12.12	clerkess	26-Nov-43	o grade	36-5
	f	13		25-Apr-88	12-May-92	211.14	49.27	4.05	typist	31-Jan-64	hnd	24-3
	f	14		11-Sep-84	12-May-92	400.00	93.33	7.67	typist	13-Oct-53	rsa	30-11
	f	14		18-Aug-86	12-May-92	299.14	69.80	5.74	typist	7-Sep-53	h grade	32-12
	f	14		5-Jan-88	12-May-92	227.00	52.97	4.35	typist	5-Jun-53	o grade	34-8
	f	14		30-Jul-90	18-Mar-92	85.29	19.90	1.64	typist	20-Oct-44	nil	45-10
	f	14		10-Jul-89	12-May-92	148.14	34.57	2.84	typist	28-Dec-68	o grade	20-7
	f	14		14-Jan-91	12-May-92	69.14	16.13	1.33	typist	27-May-65	modules	25-8
	f	15		6-Nov-89	12-May-92	131.14	30.60	2.52	typist	2-Aug-56	o grade	33-4
	f	15		7-Mar-88	12-May-92	218.14	50.90	4.18	typist	17-Jul-47	nil	40-8
	f	11		1-Oct-91	12-May-92	32.00	7.47	0.61	clerkess	18-Jun-66	o grade	25-4
	f	11		15-Jul-91	12-May-92	43.14	10.07	0.83	clerkess	14-Apr-73	scotvec	18-4
	f	14		17-Oct-88	12-May-92	186.14	43.43	3.57	telephonist	6-Oct-50	snc	38-1
	f	14		13-Nov-89	12-May-92	130.14	30.37	2.50	technician	17-Mar-69	o grade	20-8
	m	14		23-Sep-91	12-May-92	33.14	7.73	0.64	clerk	6-Feb-68	b a	23-8
	m	11		17-Apr-89	12-May-92	160.14	37.37	3.07	clerk	19-Aug-72	o grade	16-8
	m	13		8-May-89	12-May-92	157.14	36.67	3.01	technician	25-Nov-55	c and g	33-6
	m	15		2-Mar-81	12-May-92	584.14	136.30	11.20	technician	14-Jun-33	c and g	47-9
	m	13		17-Apr-89	12-May-92	160.14	37.37	3.07	technician	18-Jun-38	onc	50-10
	m	13		18-Aug-86	12-May-92	299.14	69.80	5.74	technician	14-Jan-33	nil	53-8
	m	14		8-Oct-91	12-May-92	31.00	7.23	0.59	technician	5-Sep-68	hnc	23-2
	m	14		16-Jun-86	12-May-92	308.14	71.90	5.91	technician	28-Aug-39	c and g	46-10
	m	1		1-Sep-80	12-May-92	610.14	142.37	11.70	technician	26-Jul-52	c and g	28-2
	m	14		23-Jul-90	12-May-92	94.14	21.97	1.81	technician	6-Oct-62	c and g	27-10
	m	14		23-Sep-91	12-May-92	33.14	7.73	0.64	technician	8-Feb-68	hnc	23-8
	m	14		11-Sep-89	12-May-92	139.14	32.47	2.67	technician	12-Apr-66	onc	23-6

	m	1		12-Feb-90	12-May-92	117.14	27.33	2.25	technician	13-Jan-35	c and g	55-1
	m	15		9-Jun-75	12-May-92	883.14	206.07	16.94	technician	4-Oct-41	nil	33-9
	m	13		3-Aug-89	12-May-92	144.71	33.77	2.78	technician	3-Jun-57	nil	32-3
	m	15		5-May-81	12-May-92	575.00	134.17	11.03	technician	4-Nov-48	c and g	32-6
	m	15		25-Sep-78	12-May-92	711.14	165.93	13.64	technician	9-Sep-27	nil	51-1
	f	14		19-Jun-89	12-May-92	151.14	35.27	2.90	technician	7-Jan-51	modules	38-6
	m	14		23-Sep-91	12-May-92	33.14	7.73	0.64	technician	17-Dec-66	hnd	24-10
	m	13		12-Aug-85	12-May-92	352.14	82.17	6.75	technician	27-May-54	onc	31-3
	m	14		6-May-91	12-May-92	53.14	12.40	1.02	technician	13-May-57	c and g	33-12
	m	13		16-Mar-87	12-May-92	269.14	62.80	5.16	technician	7-Jul-42	c and g	44-9
	m	14		29-Aug-83	12-May-92	454.14	105.97	8.71	technician	18-Jan-54	c and g	29-8
	m	14		30-May-90	12-May-92	101.86	23.77	1.95	technician	30-May-63	ond	26-12
	f	14		14-Jan-91	12-May-92	69.14	16.13	1.33	technician	19-Jan-63	hnd	27-12
	m	1		16-Dec-85	12-May-92	334.14	77.97	6.41	technician	18-Mar-39	onc	46-9
	m	10	call in	27-Nov-61	12-May-92	1589.14	370.80	30.48	janitor	10-Jan-30	nil	31-11
	m	10		14-Jan-85	12-May-92	382.14	89.17	7.33	janitor	20-Oct-42	nil	42-3
	m	10		20-Oct-80	12-May-92	603.14	140.73	11.57	janitor	20-Sep-30	nil	50-1
	f	10		17-Jan-64	12-May-92	1477.57	344.77	28.34	janitor	30-Nov-30	nil	33-2
	f	13	internal	6-Jul-87	12-May-92	253.14	59.07	4.85	cater mang	28-Jul-64	hnd	22-12
	f	14	job centre	18-Feb-92	3-Apr-92	6.43	1.50	0.12	caterer	13-May-64	nil	27-10
	f	14		27-Jan-92	12-May-92	15.14	3.53	0.29	caterer	29-Aug-58	nil	33-5
	f	14		6-Jan-92	12-May-92	18.14	4.23	0.35	caterer	4-Jan-48	nil	44-1
	f	14		5-Feb-92	12-May-92	13.86	3.23	0.27	caterer	1-Mar-52	nil	39-12
	f	14		18-Feb-92	6-Mar-92	2.43	0.57	0.05	caterer	19-Jul-59	nil	32-8

End of Raw Data

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APPENDIX 3

ONE-WAY ANOVA

SPSS/PC+ The Statistical Package for IBM PC 7/2/92
process if (company=1).
oneway variables=service by source(1,15) / ranges=tukey.

O N E W A Y - - - - - - - - - -

Variable SERVICE By SOURCE
Analysis of Variance

Source of varia	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	6	2066160.683	344360.1138	5.0720	.0005
Within Groups	45	3055245.951	67894.3545		
Total	51	5121406.634			

Multiple Range Test
Tukey-HSD Procedure Ranges for the .050 level - 4.36 4.36 4.36 4.36 4.36 4.36

The ranges above are table ranges. The value actually compaared with Mean(J)-Mean(I) is. 184.2476 * Range * Sqrt(1/N(I) + 1/N(J))

(*) Denotes pairs of groups significantly different at the .050 level

Mean	Source	Src 1	Src 9	Src 4	Src 15	Src 6	Src 2	Src 3
123.8550	Src 1							
136.5160	Src 9							
158.7150	Src 4							
168.5483	Src15							
196.9186	Src 6							
329.6329	Src 2							
681.4290	Src 3	*	*		*	*	*	

process if (company=2).
oneway variables=service by source(1,15) / ranges=tukey.

Analysis of Variance

Source of varia	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	10	153862467.1	15386246.71	160.6980	.0000
Within Groups	2050	196280005.7	95746.3442		
Total	2060	350142472.7			

SERVICE By SOURCE
Multiple Range Test
Tukey-HSD Procedure Ranges for the .050 level - 4.55 4.55 4.55 4.55 4.55 4.55 4.55 4.55 4.55 4.55 4.55

The ranges above are table ranges. The value actually compared with Mean(J)-Mean(I) is.. 218.7994 * Range * Sqrt(1/N(I) + 1/N(J))

(*) Denotes pairs of groups significantly different at the .050 level

Mean	Source	Src 2	Src 9	Src 1	Src 6	Src 11	Src 14	Src 7	Src 8	Src 10	Src 15	Src 13
43.9931	Src 2											
46.4000	Src 9											
84.2265	Src 1											
130.8589	Src 6											
166.3324	Src 11											
193.3126	Src 14	*										
198.2174	Src 7	*										
245.9431	Src 8	*		*								
312.4985	Src 10	*		*	*	*						
362.8360	Src 15	*		*	*	*	*	*	*			
883.9664	Src 13	*	*	*	*	*	*	*	*	*	*	

process if (company=3).
oneway variables=service by source(1,15) / ranges=tukey.
Analysis of Variance

Source of varia	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	18794.2851	6264.7617	1.3430	.2650
Within Groups	97	452474.2502	4664.6830		
Total	100	471268.5353			

Multiple Range Test

Tukey-HSD Procedure Ranges for the .050 level - 3.70 3.70 3.70

The ranges above are table ranges. The value actually compared with Mean(J)-Mean(I) is.. 48.2943 * Range * Sqrt(1/N(I) + 1/N(J))
No two groups are significantly different at the .050 level

process if (company=4).
oneway variables=service by source(1,15) / ranges=tukey.

SERVICE By SOURCE
Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	11	814.5248	74.0477	14.3952	.0000
Within Groups	167	859.0342	5.1439		
Total	178	1673.5590			

Multiple Range Test

Tukey-HSD Procedure Ranges for the .050 level - 4.68 4.68 4.68 4.68 4.68 4.68 4.68 4.68 4.68 4.68 4.68 4.68

The ranges above are table ranges. The value actually compared with Mean(J)-Mean(I) is.. 1.6037 * Range * Sqrt(1/N(I) + 1/N(J))
(*) Denotes pairs of groups significantly different at the .050 level

Mean	Source	Src 3	Src 12	Src 2	Src 1	Src 6	Src 7	Src 9	Src 11	Src 10	Src 4	Src 14	Src 13
1.4982	Src 3												
1.5500	Src 12												
1.9880	Src 2												
2.0161	Src 1												
2.0420	Src 6												
2.3443	Src 7												
2.7167	Src 9												
2.7800	Src 11												
2.8500	Src 10												
3.7267	Src 4												
3.8400	Src 14				*								
8.6410	Src 13	*	*	*	*	*	*	*	*		*	*	

process if (company=5).
oneway variables=service by source(1,15) / ranges=tukey.
Analysis of Variance

Source of varia	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	5	3121860.663	624372.1326	11.1603	.0000
Within Groups	50	2797287.643	55945.7529		
Total	55	5919148.306			

O N E W A Y
SERVICE By SOURCE

Multiple Range Test

Tukey-HSD Procedure Ranges for the .050 level - 4.19 4.19 4.19 4.19 4.19

The ranges above are table ranges. The value actually compared with Mean(J)-Mean(I) is.. 167.2509 * Range * Sqrt(1/N(I) + 1/N(J))

(*) Denotes pairs of groups significantly different at the .050 level

Mean	Source	Src 11	Src 14	Src 13	Src 1	Src 15	Src 10
78.4267	Src 11						
143.6304	Src 14						
248.8043	Src 13						
353.8067	Src 1						
517.1167	Src 15		*				
1012.9975	Src 10	*	*	*	*	*	

APPENDIX 4

TWO-WAY ANOVA

No. 1

data list file= free/source service company.list variables=all/cases to 10. 2449 cases are written to the compressed active file. SOURCE SERVICE COMPANYanova variables=service by source(1,15) company(1,5)/option 10.

A N A L Y S I S O F V A R I A N C E SERVICE BY SOURCE BY COMPANY

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	172712068.329	17	10159533.431	120.810	.000
SOURCE	150544650.222	13	11580357.709	137.705	.000
COMPANY	22167418.107	4	5541854.527	65.900	.000
2-way Interactions	22360593.742	22	1016390.625	12.086	.000
SOURCE COMPANY	22360593.742	22	1016390.625	12.086	.000
Explained	195072662.072	39	5001863.130	59.478	.000
Residual	202585872.531	2409	84095.422		
Total	397658534.603	2448	162442.212		

2449 Cases were processed. 0 Cases (.0 PCT) were missing.

C E L L M E A N S TOTAL POPULATION 360.89 (2449)

SOURCE

1	2	3	4	5	6	7
44.35	71.45	325.27	65.72	.00	128.61	183.78
(147)	(138)	(21)	(5)	(0)	(70)	(95)

8	9	10	11	12	13	14
245.94	70.98	320.72	143.38	1.55	795.83	136.17
(266)	(13)	(303)	(40)	(3)	(531)	(177)

15
340.40
(640)

COMPANY

1	2	3	4	5
304.03	409.17	83.82	3.14	279.80
(52)	(2061)	(101)	(179)	(56)

COMPANY

Source (cases)	1	2	3	4	5
1	123.85	84.23	.00	2.02	353.81
	(8)	(51)	(0)	(85)	(3)
2	329.63	43.99	.00	1.99	.00
	(14)	(119)	(0)	(5)	(0)
3	681.43	.00	.00	1.50	.00
	(10)	(0)	(0)	(11)	(0)
4	158.71	.00	.00	3.73	.00
	(2)	(0)	(0)	(3)	(0)
5	.00	.00	.00	.00	.00
	(0)	(0)	(0)	(0)	(0)
6	196.92	130.86	155.29	2.04	.00
	(7)	(57)	(1)	(5)	(0)
7	.00	198.22	.00	2.34	.00
	(0)	(88)	(0)	(7)	(0)
8	.00	245.94	.00	.00	.00
	(0)	(266)	(0)	(0)	(0)
9	136.52	46.40	.00	2.72	.00
	(5)	(5)	(0)	(3)	(0)
10	.00	312.50	.00	2.85	1013.00
	(0)	(298)	(0)	(1)	(4)
11	.00	166.33	.00	2.78	78.43
	(0)	(33)	(0)	(4)	(3)
12	.00	.00	.00	1.55	.00
	(0)	(0)	(0)	(3)	(0)
13	.00	883.97	102.99	8.64	248.80
	(0)	(471)	(25)	(21)	(14)
14	.00	193.31	79.87	3.84	143.63
	(0)	(94)	(26)	(31)	(26)
15	168.55	362.84	74.68	.00	517.12
	(6)	(579)	(49)	(0)	(6)

SERVICE BY SOURCE BY COMPANY

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	172712068.329	17	10159533.431	120.810	.000
SOURCE	136709503.509	13	10516115.655	125.050	.000
COMPANY	22167418.107	4	5541854.527	65.900	.000
2-way Interactions	22360593.742	22	1016390.625	12.086	.000
SOURCE COMPANY	22360593.742	22	1016390.625	12.086	.000
Explained	195072662.072	39	5001863.130	59.478	.000
Residual	202585872.531	2409	84095.422		
Total	397658534.603	2448	162442.212		

2449 Cases were processed. 0 Cases (.0 PCT) were missing.

MULTIPLE CLASSIFICATION ANALYSIS

SERVICE By SOURCE By COMPANY
Grand Mean = 360.886

Variable + Category	N	Unadjusted Dev'n	Eta	Adjusted for Independents Dev'n	Beta	Adjusted for Independents + Covariates Dev'n	Beta
SOURCE							
1	147	-316.54		-183.62			
2	138	-289.44		-325.60			
3	21	-35.61		42.30			
4	5	-295.16		-187.93			
6	70	-232.27		-252.49			
7	95	-177.10		-193.39			
8	266	-114.94		-153.30			
9	13	-289.91		-291.96			
10	303	-40.16		-75.78			
11	40	-217.50		-215.92			
12	3	-359.34		-98.16			
13	531	434.95		429.34			
14	177	-224.72		-136.79			
15	640	-20.49		-30.12			
			.62		.59		

MULTIPLE CLASSIFICATION ANALYSIS

SERVICE By SOURCE By COMPANY

Grand Mean = 360.886

Variable + Category	N	Unadjusted Dev'n	Eta	Adjusted for Independents Dev'n	Beta	Adjusted for Independents + Covariates Dev'n	Beta
COMPANY							
1	52	-56.85		123.69			
2	2061	48.29		38.36			
3	101	-277.06		-331.01			
4	179	-357.74		-261.18			
5	56	-81.08		-94.86			
			.30		.26		
Multiple R Squared				.434			
Multiple R				.659			

APPENDIX 5

TWO-WAY ANOVA

No. 2

process if (company ne 2).anova variables=service by source(1,15)
company(1,5)/statistics all.

* * * CELL MEANS * * *

SERVICE BY SOURCE BY COMPANY

TOTAL POPULATION 104.40 (388)

SOURCE

1	2	3	4	5	6	7
23.16	243.41	325.27	65.72	.00	118.76	2.34
(96)	(19)	(21)	(5)	(0)	(13)	(7)

8	9	10	11	12	13	14
.00	86.34	810.97	35.20	1.55	103.99	71.45
(0)	(8)	(5)	(7)	(3)	(60)	(83)

15
127.43 (61)

COMPANY

1	2	3	4	5
304.03	.00	83.82	3.14	279.80
(52)	(0)	(101)	(179)	(56)

SOURCE \ COMPANY	1	2	3	4	5
1	123.86 (8)	.00 (0)	.00 (0)	2.02 (85)	353.81 (3)
2	329.63 (14)	.00 (0)	.00 (0)	1.99 (5)	.00 (0)
3	681.43 (10)	.00 (0)	.00 (0)	1.50 (11)	.00 (0)
4	158.71 (2)	.00 (0)	.00 (0)	3.73 (3)	.00 (0)
5	.00 (0)	.00 (0)	.00 (0)	.00 (0)	.00 (0)
6	196.92 (7)	.00 (0)	155.29 (1)	2.04 (5)	.00 (0)
7	.00 (0)	.00 (0)	.00 (0)	2.34 (7)	.00 (0)
8	.00 (0)	.00 (0)	.00 (0)	.00 (0)	.00 (0)
9	136.52 (5)	.00 (0)	.00 (0)	2.72 (3)	.00 (0)
10	.00 (0)	.00 (0)	.00 (0)	2.85 (1)	1013.00 (4)
11	.00 (0)	.00 (0)	.00 (0)	2.78 (4)	78.43 (3)
12	.00 (0)	.00 (0)	.00 (0)	1.55 (3)	.00 (0)
13	.00 (0)	.00 (0)	102.99 (25)	8.64 (21)	248.80 (14)
14	.00 (0)	.00 (0)	79.87 (26)	3.84 (31)	143.63 (26)
15	168.55 (6)	.00 (0)	74.68 (49)	.00 (0)	517.12 (6)

*** ANALYSIS OF VARIANCE ***

SERVICE
BY SOURCE
COMPANY

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	8501785.702	15	566785.713	32.268	.000
SOURCE	2828490.371	12	235707.531	13.419	.000
COMPANY	3706955.989	3	1235651.996	70.347	.000
2-way Interactions	2379139.785	13	183010.753	10.419	.000
SOURCE COMPANY	2379139.785	13	183010.753	10.419	.000
Explained	10880925.487	28	388604.482	22.124	.000
Residual	6305866.878	359	17565.089		
Total	17186792.365	387	44410.316		

388 Cases were processed.
0 Cases (.0 PCT) were missing.

*** MULTIPLE CLASSIFICATION ANALYSIS ***

SERVICE By SOURCE By COMPANY

Grand Mean = 104.402

Variable + Category	N	Unadjusted Dev'n	Eta	Adjusted for Independents Dev'n	Beta	Adjusted for Independents + Covariates Dev'n	Beta
SOURCE							
1	96	-81.24		-15.04			
2	19	139.01		37.85			
3	21	220.87		189.66			
4	5	-38.68		-49.45			
6	13	14.36		-40.54			
7	7	-102.06		-5.48			
9	8	-18.06		-89.21			
10	5	706.57		598.10			
11	7	-69.20		-82.47			
12	3	-102.85		-6.28			
13	60	-.41		-1.44			
14	83	-32.95		-45.09			
15	61	23.03		-4.88			
			.53		.41		

*** MULTIPLE CLASSIFICATION ANALYSIS ***

SERVICE By SOURCE By COMPANY

Grand Mean = 104.402

Variable + Category	N	Unadjusted Dev'n	Eta	Adjusted for Independents Dev'n	Beta	Adjusted for Independents + Covariates Dev'n	Beta
COMPANY							
1	52	199.63		171.78			
3	101	-20.58		-5.85			
4	179	-101.26		-96.57			
5	56	175.40		159.72			
			.57		.52		
Multiple R Squared				.495			
Multiple R				.703			

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